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Evaluation of the American Automobile Labeling Act

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16. Abstract

Congress passed the American Automobile Labeling Act (AALA) to help consumers in the selection of new vehicles by providing information about the country of origin of vehicles and their parts. Passenger vehicles manufactured after October 1, 1994 must have labels specifying their percentage value of U.S./ Canadian parts content, the country of assembly, and countries of origin of the engine and transmission.

The evaluation is based on a consumer survey to see if new-vehicle purchasers know about the labels, understand them, and/or use them to help select a vehicle; manufacturer and dealer surveys to learn about their response to the labels; and statistical analyses of the actual trends in U.S./Canadian parts content in new motor vehicles after 1994.

Over 75 percent of consumer survey participants, even those that care deeply about "buying American," were unaware of the existence of the AALA labels. Many participants who did read the label said they used the country-of-assembly information, but none said they used the numerical U.S./Canadian parts content score or the engine/transmission information. Overall U.S./Canadian parts content in new cars and light trucks dropped from 70 percent in model year 1995 to 67.6 percent in 1998; however, it increased from 47 to 59 percent in transplants while dropping from 89 to 84 percent in Big 3 vehicles. The trends in parts content are undoubtedly influenced by the 1995 U.S.-Japan Agreement on Autos and Auto Parts and the North American Free Trade Agreement (NAFTA).

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EXECUTIVE SUMMARY

The American Automobile Labeling Act (AALA) was enacted in October 1992 in order to aid potential purchasers in the selection of new passenger motor vehicles by providing them with information about the country of origin of vehicles and their parts. The AALA provides that new passenger cars, pickup trucks, vans and sport utility vehicles manufactured on or after October 1, 1994 have labels specifying the percentage value of the U.S./Canadian parts content of each vehicle, the country where the vehicle was assembled, and the countries of origin of its engine and transmission. On July 21, 1994, the National Highway Traffic Safety Administration (NHTSA) published a new regulation to implement the AALA (Part 583 of Title 49 of the *Code of Federal Regulations*).

The Government Performance and Results Act of 1993 and Executive Order 12866 require agencies to evaluate their existing regulations to see if they are achieving their objectives and to assess their impacts. This report evaluates the AALA from two aspects.

First, since AALA is an information program, NHTSA surveyed 646 consumers in 1998 who had bought or leased a new vehicle during the past six months or were planning to buy or lease within the next three months to find out what percentage had heard of the labels, read them, understood them, and/or used them to help select a vehicle. Because if nobody reads, or nobody understands, or nobody uses the labels, they are not achieving their objective of providing information to potential purchasers. The survey investigated how many consumers think the country of origin of vehicles/parts is critically important information and if these consumers in particular are reading and using the labels to assist their purchasing decisions. NHTSA also surveyed manufacturers and dealers to learn about their activities and costs to produce and disseminate the labels.

The principal finding was a disconnect between consumers' ignorance of the labels and their belief in the importance of buying a U.S./Canadian product. The great majority of consumers were unaware of the existence of the labels, only 7 percent had read the label at a dealership, and not a single person explicitly stated they had used the numerical parts-content score on the AALA label to comparison-shop among make-models according to their percentages of U.S./Canadian parts content. In fact, the only data on the label that a substantial number of consumers called influential was the country of final assembly. (Actually, country-of-assembly information was available to consumers before the AALA, but not necessarily in a standardized and conveniently accessible form like the AALA labels.)

Yet, one-sixth of the survey participants, a proportion that would extrapolate to 2,500,000 new-vehicle sales per year in the United States, rate it critically important that vehicles be made in the U.S. or Canada and, more generally, always try to "buy American" when they go to a store. But even this group is no more cognizant of the labels than the average consumer. They mostly "buy American" simply by acquiring any Big 3 vehicle assembled in North America. They are not using the numerical parts-content scores to comparison-shop for models with the highest U.S./Canadian parts content.

Second, the report statistically analyzes sales data to track the share of U.S./Canadian parts and assemblies in new vehicles during 1994-98. Did it rise or fall? How do trends in motor vehicles compare to other consumer products such as radios or refrigerators? Did make-models that increased U.S./Canadian parts content experience, on the average, higher or lower sales?

In this context, however, it is important to recognize that well before the AALA, in fact since the 1960's, a series of laws, regulations, international agreements, incentives and economic conditions have motivated foreign-based manufacturers to transplant some of their assembly and parts facilities to North America. Above all, a 1995 U.S.-Japan Agreement on Autos and Auto Parts explicitly aimed to increase U.S. parts content in the transplant vehicles of Japanese-based companies. These market analyses just tell us what actually happened to vehicle sales in 1995-98. They will not tell us to what extent, if any, AALA labels influenced the observed trends.

The introduction of AALA labels in model year 1995 was not followed by a resurgence of U.S./Canadian parts content in the overall new-vehicle fleet, but rather a modest decline from an average of 70 percent in model year 1995 to 67.6 percent in model year 1998. The net effect, however, conceals two trends working in opposite directions.

Transplant vehicles (assembled in North America by foreign-based manufacturers) increased their proportion of U.S./Canadian parts from 47 to 59 percent and reduced their content of overseas parts. At first glance, that could be a response to the labels. But the strong, explicit terms of the 1995 U.S.-Japan Agreement and the current dearth of consumer interest in AALA's numerical parts-content scores intuitively suggest that the Agreement and earlier actions have had more influence than the AALA labels. (However, the parts-content scores on the AALA labels have helped Federal agencies monitor progress under the U.S.-Japan Agreement.)

The Big 3 reduced U.S./Canadian parts content from 89 to 84 percent in 1995-98, apparently by sourcing or purchasing more parts in Mexico. The net shift, in essence, is largely from overseas countries to Mexico, a plausible development given the North American Free Trade Act (NAFTA).

In 1992-98, unprecedented prosperity and a strong dollar in the United States were associated with increases in net imports for most consumer goods, such as refrigerators, carpets, or furniture. The automotive industry, with programs such as AALA, the U.S.-Japan Agreement, etc. did not massively differ from the economy-wide pattern, but the growth in import dependence for motor vehicles and parts was just a bit smaller than the average for other consumer goods.

Here are the principal findings of the evaluation, followed by a list of conclusions, a synopsis of the impact of AALA to date, and possible future strategies to enhance consumer awareness and use of AALA information - or to reduce the burden of AALA.

CONSUMERS' AWARENESS AND INFLUENCE BY THE AALA LABELS

- In a survey of 646 people who had bought or leased new vehicles during the past 6 months or were planning to do so within 3 months:

23%*	knew of the existence of the AALA label
15%*	said they had seen an AALA label
7%*	had read the label at a dealership
5%*	said they were influenced by the label to any degree whatsoever
2%*	were moderately or strongly influenced by the label because it identified the vehicle's country of assembly
nobody	said they used the labels to comparison-shop among make-models according to their percentages of U.S./Canadian parts content

- Dealers concurred that the country-of-assembly is the information on the AALA label most important to consumers.

CONSUMERS' UNDERSTANDING OF THE AALA LABELS

- Among the 41 people who had read the label at a dealership:

86%	thought it was "very easy" or "somewhat easy" to understand

However, only

35%	correctly identified that Canadian parts were included in the numerical parts content score, whereas
23%	mistakenly believed that Mexican parts are included in this score

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* The percentages in this table are based on the full set of 646 participants and they are not additive. Each group is a subset of all the preceding groups. For example, 5 percent of the 646 participants said they were influenced by the label to any degree whatsoever, and all of these had also read the label at a dealership, seen it, and knew of its existence (i.e., belonged to all three preceding groups).

CONSUMERS' KNOWLEDGE OF WHERE THEIR OWN VEHICLE WAS ASSEMBLED

94%	of purchasers of Big 3 vehicles assembled in the U.S. or Canada correctly identified them as assembled in the U.S. or Canada (only 1% thought they were assembled overseas and 5% didn't know).
81%	of purchasers of vehicles assembled overseas correctly identified them as assembled overseas, although 17% named the wrong country (11% thought they were assembled in the U.S. or Canada and 8% didn't know).
but only 54%	of purchasers of transplants correctly identified them as assembled in the U.S. or Canada (26% thought they were assembled overseas and 20% didn't know).

IMPORTANCE OF U.S./CANADIAN ASSEMBLY AND CONTENT TO CONSUMERS

- Survey participants rated from 0 to 100 the importance of various factors in selecting a new vehicle. The average new-vehicle customer considers "Made in the U.S./Canada" (43) less important than most of the other factors typically considered decisive in selecting a vehicle: e.g., reliability (93), safety (85), price (76), styling (70).

- Purchasers of Big 3 vehicles consider "Made in the U.S./Canada" (57) about as important as a vehicle's optional equipment (58), fuel economy (57) and cargo capacity (59), but less decisive than its reliability (93), drive quality (90), safety (84), size (76), price (72), or styling (72).

- Purchasers of transplant vehicles consider "Made in the U.S./Canada" (26) nearly the least important factor. Buyers of import vehicles consider it even less important (11).

THE STAUNCH "BUY AMERICAN" MARKET SEGMENT

- One-sixth of the survey participants considered "Made in the U.S./Canada" critically important (100 rating) for their new vehicle and, more generally, always try to "buy American" when they go to a store.

- This staunch "buy American" group had recently bought 96 percent Big 3 vehicles assembled in the United States, Canada or Mexico and 4 percent transplants assembled in the United States. None had bought an overseas import.

- Only 20 percent of this group knew of the existence of the AALA label, and only 9 percent had read it at a dealership. Thus, most of them bought a car assembled in North America without consulting the label or ascertaining the U.S./Canadian parts content.

POTENTIAL INFLUENCE OF THE LABELS

- In the survey, 56 percent of those who had not heard of the label said that now that it had been explained to them it would influence their future purchase of a vehicle.

DISSEMINATION OF THE LABELS

- At this time (2000), summaries of label information - e.g., tables that list the make-models in each vehicle class by U.S./Canadian parts content - are not available to consumers via the news media or the Internet.

- Only six of the 646 vehicle purchasers had the AALA label pointed out and explained to them by a salesperson. Only one said it was an important part of the sales presentation.

- Only 2 percent of dealers said their sales staff provides label information to the customers without being asked.

- Two of the 21 manufacturers produced brochures explaining the labels in 1994. Both discontinued the brochures, citing lack of consumer interest.

- 19 manufacturers said they had never encouraged or required dealers to make customers aware of the AALA label.

- 51 percent of dealers said that manufacturers provided them with no guidelines or materials for training their staff to explain the labels.

COST OF AALA TO THE MANUFACTURERS

- Manufacturers reported they had spent a cumulative total of $37.9-47.5 million to implement the AALA through September 1998, including start-up and recurring costs.

- Since 60 million passenger vehicles were sold from October 1994 through September 1998, that amounts to $0.63-0.79 per vehicle, including start-up. The cost of operating and maintaining the AALA, excluding start-up, is estimated to be $0.10-0.30 per vehicle.

PERCENTAGE OF U.S./CANADIAN PARTS CONTENT IN NEW VEHICLES

- The value-weighted average U.S./Canadian parts content in new passenger vehicles registered in the United States, by model year, was as follows:

	1995	1998
All new vehicles	**70**	**67.6**
Big 3	89	84
Transplants	47	59
Imports from overseas	4	4

- Overall U.S./Canadian content dropped from 70 percent in model year 1995 to 67.6 percent in 1998.

- Big 3 vehicles, on the average, have substantially higher U.S./Canadian content than transplants (vehicles assembled and sold in North America by foreign-based companies), and transplants' content is much higher than imports' (vehicles assembled overseas by foreign-based companies).

- Big 3 vehicles are using fewer U.S./Canadian parts and more Mexican parts.

- Transplants have substantially increased U.S./Canadian parts and reduced overseas parts.

- Only one manufacturer stated that parts-content information labels influenced them to shift any operations from one country to another (and that company did not substantially increase U.S./Canadian content in 1995-98).

PERCENT OF NEW VEHICLES ASSEMBLED IN THE UNITED STATES OR CANADA

- The percent of new vehicles registered in the United States, by country of assembly, in model year 1994, just before the AALA and in model year 1998, was as follows:

	1994	1998
United States or Canada	84.8	83.2
Mexico	2.2	4.1
Overseas	13.0	12.7

- More vehicles sold in the United States are being assembled in Mexico, and proportionately fewer in the U.S./Canada or overseas.

- The percent shares of new-vehicle registrations in the United States for Big 3, transplants and imports in model year 1994, just before the AALA and in model year 1998, were:

	1994	1998
Big 3		
Assembled in U.S./Canada	71.0	67.0
Assembled in Mexico	1.8	2.8
Imports from overseas	.5	.2
	73.3	70.0
Foreign-based companies		
Assembled in U.S./Canada	13.8	16.2
Assembled in Mexico	.4	1.3
Imports from overseas	12.5	12.5
	26.7	30.0

- The Big 3 lost some market share to foreign-based companies in model years 1994-98.
- "Transplants" assembled in North America accounted for the entire gain by the foreign-based companies.
- Big 3 and foreign-based companies both increased exports from Mexico to the U.S.
- "Captive imports" from overseas by the Big 3 captured a negligible share of the market in 1994-98.

CARS VS. TRUCKS

- **U.S./Canadian parts content** (value-weighted averages), by vehicle type:

	1995	1998
Passenger cars	64	60
Pickup trucks	83.3	83.1
Vans	85.5	80.5
Sport utility vehicles	70	69

- Pickup trucks and vans have higher U.S./Canadian content than cars and SUVs.
- Pickup trucks and SUVs came closest to maintaining their levels of U.S./Canadian content from 1995 to 1998.
- **Market shares** (percent of new vehicles registrations), by vehicle type and model year:

	1994	1998
Passenger cars	58.3	53.4
Pickup trucks	20.2	17.9
Vans	10.7	11.0
Sport utility vehicles	10.8	17.7

- The market shifted primarily from cars to SUVs
- Pickup trucks and vans had smaller changes in market share.
- Since cars and SUVs have similar U.S./Canadian content, the net impact of the shift from cars to SUVs on overall U.S./Canadian content was negligible.
- **Country of assembly** (value-weighted percent of new-vehicle registrations), by vehicle type and model year:

	1994	1998
Passenger cars		
U.S./Canada	75.5	73.9
Mexico	2.6	3.6
Overseas	21.9	22.5
Pickup trucks		
U.S./Canada	95.6	92.3
Mexico	1.0	7.3
Overseas	3.5	.4
Vans		
U.S./Canada	96.6	97.7
Mexico	-	-
Overseas	3.4	2.3
Sport utility vehicles		
U.S./Canada	84.6	78.5
Mexico	-	2.4
Overseas	15.4	19.1

- The overwhelming majority of pickup trucks and vans are assembled in North America. As a consequence, they also have more U.S./Canadian parts content than cars and SUVs.

- Imports from overseas are primarily cars and SUVs - hardly any pickup trucks by 1998.

- Exports of pickup trucks and SUVs from Mexico to the United States increased dramatically from 1994 to 1998.

- Tariffs on pickup trucks undoubtedly discouraged imports from overseas, whereas NAFTA stimulated exports from Mexico to the United States.

IMPORT DEPENDENCE IN MOTOR VEHICLES COMPARED TO OTHER INDUSTRIES

The Department of Commerce publishes annual statistics on U.S. production, consumption, exports and imports in various industries. Their statistics are not directly comparable to the numerical scores on the AALA labels (which include Canada, for example). They indicate that:

- Net import dependence in finished motor vehicles was 21.80 percent in 1992, before AALA and 23.11 percent in 1998, an increase of 1.31 percentage points.

- Net import dependence for 27 non-automotive consumer products (unaffected by AALA) was 7.34 percent in 1992 and 11.55 percent in 1998, an increase of 4.21 percentage points.

- In other words, the growth in import dependence for motor vehicles was somewhat less than the average for other industries unaffected by the AALA, the U.S.-Japan Agreement on Autos and Auto Parts, etc.

RELATIONSHIP BETWEEN U.S./CANADIAN PARTS CONTENT AND SALES

- Make-models that increased their U.S./Canadian parts content from one model year to the next experienced, on the average, a slight gain in sales.

- No claim of a cause-and-effect relationship is made here. The analysis merely describes what happened to sales of make-models that increased U.S./Canadian parts content.

CONCLUSIONS

- Most consumers are unaware of the existence of the AALA labels.

- A sizable proportion of those who know about the labels are influenced by the country-of-assembly information, but few make use of the numerical parts-content score, or the engine and transmission information.

- Even those consumers that care deeply about U.S./Canadian parts content and assembly do not rely extensively on the AALA labels to pinpoint the make-models with high U.S./Canadian content. Instead, they simply buy Big 3 vehicles.

- The manufacturers and their dealers rarely use the AALA information as a selling point.

- More extensive dissemination, such as tables that conveniently list the make-models in each vehicle class by U.S./Canadian parts content, could increase consumers' awareness of the AALA data. It is unknown to what extent, if any, that might influence their purchasing decisions.

- Even consumers who have read the AALA label are often unaware that its numerical score includes Canadian parts but excludes Mexican parts.

- The introduction of AALA labels in model year 1995 was not followed by a resurgence of U.S./Canadian parts content or a massive shift from overseas imports to vehicles assembled in North America (or vice-versa).

- Nevertheless, data from the Department of Commerce suggest that the growth in import dependence for motor vehicles during 1992-98 was somewhat less than the average growth in import dependence for other consumer products unaffected by AALA, the U.S.-Japan Agreement on Autos and Auto Parts, etc.

- Transplant vehicles substantially increased their U.S./Canadian parts content during 1995-98 and a few make-models reached levels that rival some Big 3 vehicles. It is unknown to what extent, if any, the AALA labels contributed to the increase, but, intuitively, the U.S.-Japan Agreement and earlier actions seem to have been the main influences.

- Much of the public is still unaware that transplants are assembled in North America and contain significant proportions of U.S./Canadian parts.

- The Big 3 and some foreign-based manufacturers stepped up parts and assembly operations in Mexico after the inception of NAFTA. This has slightly reduced average U.S./Canadian parts content.

- Make-models that increased U.S./Canadian parts content did not suffer in the marketplace.

SYNOPSIS: IMPACT OF THE AALA IN 1995-98

The evaluation suggests that the AALA has had two definite and one doubtful impact. First, many of the consumers who read the AALA labels at the dealership find them convenient and influential for identifying in what country a vehicle was assembled. Second, Federal agencies use the parts content scores to monitor progress under the U.S.-Japan Agreement on Autos and Auto Parts. The doubtful impact is that the labels may have contributed to the increase of U.S./ Canadian content in transplants during 1995-98: while this increase certainly took place, the role of the labels is doubtful - given that the U.S.-Japan Agreement on Autos and Auto Parts, and earlier measures, seem to have been quite a bit more influential. However, two current shortcomings of the AALA are: (1) Most consumers don't know the AALA labels exist. (2) Even those who know of the labels rarely use the numerical parts-content scores or the information about engines and transmissions.

POSSIBLE FUTURE ALTERNATIVES

(1) Expand public information and education: Explore potential strategies to disseminate the AALA information more extensively to the public in convenient formats - e.g., via the Internet, listing make-models within the various vehicle classes by percent U.S./Canadian content. If market research such as focus groups indicates a strategy(s) really promises to increase consumer awareness and ultimately affect purchase decisions, implement that strategy(s).

(2) Leave the program unchanged: The program would continue to supply a modest proportion of consumers with country-of-assembly information they find useful. If the numerical USCan content scores have had any influence on manufacturers to date, that influence could continue. However, it would be unreasonable to expect future increases in consumer awareness of the labels.

(3) Modify AALA to require only country-of-assembly information (or repeal AALA): Since country-of-assembly is currently the only widely used information on the AALA label, Congress may wish to delete the numerical parts-content score and the information on the engine and transmission. That would largely eliminate AALA's burden on manufacturers and suppliers. Or, Congress could simply repeal the AALA since country-of-assembly information can be obtained elsewhere. This alternative risks losing any impact the numerical score may be having on manufacturers today, or any potential impact if it were more widely known to consumers.

CHAPTER 1

INTRODUCTION

The American Automobile Labeling Act (AALA) was enacted in October 1992 in order to aid potential purchasers in the selection of new passenger motor vehicles by providing them with information about the country of origin of vehicles and their parts[1]. The AALA provides that new passenger cars, pickup trucks, vans and sport utility vehicles (SUVs) manufactured on or after October 1, 1994 have labels specifying the percentage value of the U.S./Canadian (USCan) parts content of each vehicle, the country where the vehicle was assembled, and the countries of origin of its engine and transmission. Two examples of AALA labels are illustrated in Figure 1-1. On July 21, 1994, the National Highway Traffic Safety Administration (NHTSA) published[2] a new regulation[3] to implement the AALA.

1.1 Evaluation of the American Automobile Labeling Act

The Government Performance and Results Act of 1993[4] and Executive Order 12866,[5] "Regulatory Planning and Review," require agencies to conduct periodic evaluations of existing regulations and programs to assess if they are effectively achieving their regulatory objectives, or whether modifications are needed to make them more effective or less burdensome. Most NHTSA evaluations address safety regulations and consist of statistical analyses of crash data to estimate actual benefits (lives saved, injuries and crashes prevented) and engineering analyses of costs[6]. The evaluation of a non-regulatory consumer program that disseminates safety information likewise boiled down to a statistical analysis of crash data[7]. But in the case of AALA,

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[1]The American Automobile Labeling Act originally was part of the *Department of Transportation and Related Agencies Appropriation Act for Fiscal Year 1993*, Public Law 102-388, October 6, 1992. Subsequently, the AALA was incorporated into Title II of the *Motor Vehicle Information and Cost Savings Act*, Public Law 103-272, July 5, 1994.

[2]*Federal Register* 59 (21 July 1994): 37294.

[3]*Code of Federal Regulations*, Title 49, General Printing Office, Washington, 1998, Part 583.

[4]*Government Performance and Results Act of 1993*, Public Law 103-62, August 3, 1993.

[5]*Federal Register* 58 (4 October 1993): 51735.

[6]*Evaluation Program Plan 1998-2002*, NHTSA Report No. DOT HS 808 709, Washington, 1998, pp. 19-27.

[7]Kahane, C.J., *Correlation of NCAP Performance with Fatality Risk in Actual Head-On Collisions*, NHTSA Technical Report No. DOT HS 808 061, Washington, 1994.

FIGURE 1-1: SAMPLE AALA LABELS

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE:

U.S./CANADIAN PARTS CONTENT 65%

MAJOR SOURCES OF FOREIGN PARTS CONTENT:

JAPAN: 15%

FOR THIS VEHICLE:

FINAL ASSEMBLY POINT: XXXXXX, OHIO, USA

COUNTRY OF ORIGIN:

ENGINE PARTS: U.S.

TRANSMISSION PARTS: JAPAN

NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE:

U.S./CANADIAN PARTS CONTENT 15%

MAJOR SOURCES OF FOREIGN PARTS CONTENT:

MEXICO: 45%
GERMANY: 20%

FOR THIS VEHICLE:

FINAL ASSEMBLY POINT: XXXXXX, MEXICO

COUNTRY OF ORIGIN:

ENGINE PARTS: MEXICO

TRANSMISSION PARTS: GERMANY

NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS a non-safety consumer information program, it is not so obvious what needs to be evaluated and what data should be analyzed. First, it is necessary to understand the objectives and goals of the regulation and the legislation that engendered it. It is also noteworthy that AALA does not exist in a vacuum, but is one of a series of laws, regulations, international agreements and incentives that may influence manufacturers' decisions on where to manufacture or source parts and assemblies.

Stated goals of the AALA: The NHTSA regulation establishing the labels says rather neutrally their purpose is "to aid potential purchasers in the selection of new passenger motor vehicles by providing them with information about the value of the U.S./Canadian and foreign parts content of each vehicle."[8] It does not say how they might use the information or how it might affect their selection. Still, even this brief statement is enough to establish an initial evaluation objective: to survey purchasers and find out what percentage have heard of the labels, read them, understood them correctly, and/or used them to help select a vehicle. Because if nobody reads, or nobody understands, or nobody uses the labels, they are not "aiding potential purchasers."

Barbara Mikulski, the Senator from Maryland who introduced the AALA in 1992, stressed that its goal was consumer information, like the "label that tells us how many calories are in [a] can of soup." "This legislation does not attack anyone, nor punish any nation. If people want to buy a foreign car, that is their choice." However, for the "millions of Americans [who] want to buy American cars,...[who] want to practice pocketbook patriotism,...[who believe] American automobile workers build some of the best cars in the world," these "easy-to-read stickers" will "make sure they have the opportunity to know what they are doing.[9]"

Thus, another group of evaluation objectives emerges. We should statistically analyze sales trends to see if the share of U.S. parts and assemblies has changed since AALA, and in particular if make-models that increased their U.S. parts content experienced a change in sales. In addition, the purchaser survey should investigate how many consumers staunchly believe in "buying American" and if these consumers in particular are reading and using the labels to assist their purchasing decisions.

Other potential effects of the AALA - the lesson from NCAP: Although AALA is a consumer information program, its most far-reaching effect could be directly on the manufacturers, rather than on consumer behavior or the manufacturers' response to that behavior. In other words, the labels could for various reasons directly encourage the manufacturers to increase or decrease U.S. parts or assemblies even without strong evidence of consumer interest in and response to the labels.

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[8]*Code of Federal Regulations*, Title 49, General Printing Office, Washington, 1998, Part 583.2.

[9]*Congressional Record - Senate* 138 (19 February 1992): 1710. *Congressional Record - Senate* 138 (4 August 1992): 11415.

NHTSA's New Car Assessment Program (NCAP) is a prime example. In 1979 the agency began frontal crash tests of cars and published numerical safety performance scores. While this program and its subsequently developed "star ratings" are now well known, it was not so at first. If a consumer survey similar to the one described in Chapter 6 of this report had been conducted during the early 1980's, it would no doubt have shown that few consumers knew about NCAP scores, and fewer used them to select their new car. Yet NCAP scores and survival rates in actual crashes improved remarkably during those early years: 49 percent of model year 1979-82 cars but just 14 percent of 1983-86 cars had poor NCAP scores. The fatality risk for belted front-seat occupants in head-on collisions decreased by 20 percent[10]. The mere arrival of a government-issued **numerical** score, regardless of consumer awareness or response, apparently galvanized an industry-wide effort to excel on that score. Manufacturers always desire to build safe vehicles, but now the NCAP score gave them a focus and a measuring tool to quantify and compare "safety." In addition to a positive motivation to achieve good scores, it also created negative motivations to avoid poor scores, such as: unwanted government attention to poor performance, discussion in the trade press that could ultimately feed public perceptions of shoddy design, or potential litigation by people involved in crashes.

AALA's numerical parts-content score could have the same effect on manufacturers even if few individual consumers use the information. It is a government-issued score that quantifies and allows explicit comparison of vehicles' North American content. It differs from NCAP in that the "right" direction for the score is not obvious but depends upon whom you ask: everybody wishes for safer vehicles, but not necessarily "more American" vehicles. But manufacturers could still be motivated to avoid scores that might result in unwanted attention or discussion in the trade or popular press.

The implications for the evaluation are to increase the importance of statistical analyses of sales trends to see if the share of U.S. parts and assemblies has changed since AALA. We should ask the manufacturers if the labels were a factor in decisions to locate parts manufacturing or sourcing. Last but not least, if the study shows a strong change in North American parts content in some group of vehicles, even though few consumers pay attention to the numerical parts-content score, those two findings should not be viewed as contradictory.

Three caveats: Three important caveats, however, arise in connection with these evaluation objectives. First, AALA as enacted requires the labels to specify the proportion of **U.S. or Canadian** parts, not just U.S. parts. Since the numerical scores on the AALA labels pertain to U.S./Canadian content, not just U.S. content, so too this report will analyze the trend in USCan content, not U.S. content[11].

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[10]Kahane (1994), pp. 129-147, especially p. 137.

[11]The International Trade Administration of the U.S. Department of Commerce explains: "For the purposes of the AALA, the United States and Canada are considered to be one source of auto parts. This is due to the high degree of integration between the two markets, originally encouraged by the U.S./Canada Auto Pact of 1965. The AALA was written before the passage of the North American Free Trade Agreement (NAFTA), and therefore does not include Mexican

Second, it is not the mission of NHTSA or the Department of Transportation to persuade consumers to buy American vehicles in preference to those built by our international trading partners, whereas it is very much our mission to make vehicles safer[12]. The analysis results in this report are presented in a spirit of "here is what actually happened to vehicle sales," leaving readers to judge by their own values if the outcome was favorable or not. That is a contrast to our safety evaluations, where NHTSA most emphatically believes that the more lives saved, the better.

Third, the AALA is just one of many laws, regulations, international agreements and incentives that may influence manufacturers' decisions on where to manufacture or source parts and assemblies. Sections 1.2 and 1.3 will review those other measures. Although this evaluation will demonstrate some significant trends in recent vehicle sales and parts content, it will in general not attempt to assess how much of the trend, if any, is due to the AALA, and how much is due to other measures or a carryover of earlier trends.

Evaluation questions: Here is a more detailed list of questions addressed by the evaluation:

- What has been the overall trend in the USCan parts content in new vehicles during model years 1995-98, since AALA took effect? Has it increased or decreased? What factors have been influential?
- Has there been a market shift in 1995-98 from vehicles assembled overseas to vehicles assembled in North America (or vice-versa)?
- Have foreign-based companies changed the proportion of USCan parts since 1995 in the "transplant" vehicles they assemble in North America?
- Have the Big 3 companies maintained the proportion of USCan parts since 1995 in their vehicles?
- Did make-models that increased their proportion of USCan parts from one year to the next experience a change in sales?
- How does the import-dependence trend in motor vehicles since AALA compare to the trends in other consumer goods not regulated by AALA, such as radios or refrigerators?
- What percentage of new car purchasers have heard of, seen and read the AALA labels?

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sourced parts as part of "U.S. Content". [*sic*] No revision of the AALA has been made since the passage of NAFTA to change the counting methodology to a NAFTA basis." (www.ita.doc.gov/auto/aala.html as of November 17, 1999)

[12]Whereas the National Traffic and Motor Vehicle Safety Act of 1966 (Public Law 89-563) declares that its purpose is "to reduce traffic accidents and deaths and injuries" when it authorizes DOT to prescribe safety standards and carry out needed research, the AALA has no corresponding statement of purpose and simply requires DOT to issue labeling requirements.

- What percentage understand the information on the labels? Do people know that the numerical score includes the proportion of U.S. or Canadian parts, but not Mexican parts?

- How important is the country of origin of a vehicle or its parts to the average purchaser?

- Does the average purchaser know in what country his or her new vehicle was assembled?

- How large is the staunch "Buy American" market segment? What vehicles do they buy? Do they use the labels to assist their purchasing decisions?

- Why have manufacturers moved production facilities or parts sourcing from overseas to North America or vice versa? Were the AALA labels influential?

- What is the cost of the regulation to manufacturers?

- What guidance are manufacturers giving dealers about the AALA labels?

- What information are dealers giving purchasers about the AALA labels? Do sales staff explain the labels or make them part of their sales presentation?

Chapter 2 of this evaluation is a statistical analysis of the sales, prices, USCan parts content and assembly locations of new cars, pickup trucks, vans and SUVs during 1994-98. It tracks the average USCan content and percent assembled in the U.S. or Canada, year-by-year, since AALA took effect: for the entire new-vehicle fleet, and for subgroups such as Big 3, transplants, imports, cars, pickup trucks, etc. Chapter 3 uses regression analyses to investigate if make-models that increased USCan parts content from one model year to the next experienced a change in sales different from make-models with unchanged or decreased USCan content. Chapter 4 analyzes production, imports, exports, and U.S. sales in the motor vehicle industry and in other industries unaffected by AALA, comparing import dependence in autos to other consumer products during 1992-98 - before and after AALA.

Chapters 5-8 document the methods and results of three surveys conducted in late 1998 to assess the effects of the regulation: 1) a telephone survey of recent and potential purchasers of new passenger cars, pickup trucks, vans and SUVs; 2) a letter survey of the Big 3 and foreign-based manufacturers of these vehicles; and 3) a letter survey of new-vehicle dealers.

The "Discussion of Findings" that follows Chapter 8 assembles, compares and reconciles the statistical and survey results to reach overall conclusions about the consumer response and apparent impact of the AALA labels.

1.2 Other programs and factors influencing parts content and assembly locations

Since the 1960's, a series of laws, regulations, international agreements and incentives have attempted to encourage the manufacturing of parts and vehicle assemblies in North America and combat long-term worldwide economic trends that had been increasing imports into the United

States. These measures will now be discussed in more or less chronological order. One of the most recent and important measures, which will be discussed separately in Section 1.3, is the 1995 U.S.-Japan Agreement on Autos and Auto Parts, which began shortly after the AALA labels and was directly aimed at increasing North American parts content in transplant vehicles. The Agreement, as well as the other measures and pre-existing trends described here, are no doubt responsible for much if not all of the post-AALA increase of USCan parts content in transplant vehicles noted in Chapter 2 of this evaluation.

Import dependence trends in the U.S. auto market The United States automobile market, up until the 1970's, was dominated by the Big 3 automakers: General Motors, Ford and Chrysler. Imports accounted for less than 10 percent of the market through 1969[13]. After overseas countries recovered from the devastation of World War II and developed new plants, they caught up with U.S. technology while retaining a cost advantage. Imports rose steadily through 1972. However, the petroleum crises of 1973-74 and 1979-80 greatly accelerated the trend because overseas companies were ready to meet the demand of U.S. consumers for fuel-efficient vehicles while the Big 3 had to retool quickly to produce smaller automobiles. This gave the foreign-based manufacturers additional advantages in the cost and reliability of smaller automobiles. U.S. imports of Japanese automobiles increased from 942 units in 1960[14] to 233,000 in 1970[15] and 2,000,000 by 1980[16]. Foreign-based companies had gained consumer acceptance in the United States and a persistent 20-30 percent share of the new-vehicle market. Even though fuel supplies were again abundant in the 1980's and 1990's, and even though some overseas countries lost their cost advantage relative to the United States, foreign-based companies were able to retain their market share by expanding their production to larger cars and SUVs and, as we shall see, by moving some of their manufacturing and purchasing to North America.

Voluntary Restraint Agreements The petroleum crisis of 1979-1980 and a subsequent business recession in the United States during 1981-82 was followed by distress in the U.S. auto industry. Production of motor vehicles fell 45 percent between 1978 and 1982, and industry employment dropped by 39 percent, from 1,058,000 to 648,000[17], while the Japanese import share of the U.S. passenger car market rose from 9 percent in 1976 to 22 percent in 1981.

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[13]*MVMA Motor Vehicle Facts & Figures '78*, Motor Vehicle Manufacturers Association, Detroit, 1978, p. 18.

[14]*Motor Vehicle Statistics of Japan*, Japan Automobile Manufacturers Association, Washington, 1984.

[15]*World Motor Vehicle Data, 1980 Edition*, Motor Vehicle Manufacturers Association, Detroit, 1980.

[16]United States Department of Commerce.

[17]Bureau of Labor Statistics, employment series for the "Motor Vehicle and Equipment" industry (SIC 371).

The automobile industry and the labor unions sought relief from rapidly increasing imports, initially without success. In June 1980, the Ford Motor Company and the United Auto Workers filed a joint petition for relief from imports under section 201 of the Trade Act of 1974 with the U.S. International Trade Commission (investigation No. TA-201-44). The petition claimed that the U.S. auto industry was being substantially injured by imports. The Commission determined that the industry was not injured. Next, momentum gained in 1981 for legislation to restrict Japanese imports to 1.6 million units, but this too was not enacted.

However, on May 1, 1981, the Government of Japan's Ministry of International Trade and Industry (MITI) announced a three-year Voluntary Restraint Agreement (VRA), limiting Japanese auto exports to the United States to 1.68 million units during each of the first two years and to about 2.02 million units in fiscal year 1984[18]. On March 1, 1985, President Reagan announced that the United States would not ask the Japanese Government to renew the VRA for 1985; however, on March 28,1985, the Japanese Government announced that it would impose a limit on annual auto exports to the United States to 2.3 million units. Japan reimposed this limit annually until 1992, when it further reduced its quota to 1.65 million vehicles for the fiscal year ending March 1, 1993[19]. MITI announced in early 1994 (before the AALA and the U.S.-Japan Agreement on Autos and Auto Parts took effect) that they would discontinue the limits[20].

One important feature of the VRA that undoubtedly spurred the development of transplant factories is that it only applied to vehicles assembled in Japan. Vehicles produced at transplant or joint-venture factories located in the United States did not count toward the VRA, and the Japanese companies were able to sell as many vehicles from these facilities as they wished. Thanks to transplants, Japanese companies eventually could sell as many vehicles as American consumers wanted without even coming close to the limits set by the VRA.

<u>The first transplants and joint ventures</u> The first transplants and joint ventures involved European countries and were at least partly motivated by currency values and local incentives (to be discussed below). Production of automobiles in the United States by foreign-owned manufacturers began with the start-up of Volkswagen of America's plant in Westmoreland, Pennsylvania in 1978. Currency exchange rates made production less costly in the United States than in West Germany. In 1988, following the rebound of the dollar, Volkswagen closed this factory. In late 1980, Renault of France acquired 46.6 percent of American Motors Corporation (AMC). Renault and AMC jointly designed a car that was produced at the AMC Kenosha, Wisconsin assembly plant.

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[18]At a later date, MITI announced a unilateral restriction of exports of vehicles such as four-wheel-drive station wagons and "jeep" type vehicles to the United States (82,500 units) and Puerto Rico (70,000 units).

[19]*U.S. Industrial Outlook 1994*, U.S. Department of Commerce, International Trade Administration, Washington, 1994, p. 35-9.

[20]Maskery, Mary Ann, "Japanese Offer Slight Hike in Parts Buying," *Automotive News*, April 4, 1994, p. 48.

Japan's entrance into the market through U.S. automobile production facilities followed in 1982. Honda of America Manufacturing, Inc. began producing passenger cars at its new plant in Marysville, Ohio and expanded operations in 1989 with another plant in East Liberty, Ohio. In 1989, Honda began manufacturing engines and suspensions at it plant in Anna, Ohio, where it had been manufacturing motorcycles since 1979. In 1999, Honda announced "Honda Manufacturing of Alabama" a new company that will produce engines and an SUV or a minivan (or both) at a new plant in Lincoln, Alabama beginning in 2002.

Pressure for domestic-content legislation In the early 1980's, as imports from Japan increased and Japanese automakers opened manufacturing facilities in the United States, there was concern by the U.S. auto and auto parts industry that foreign-nameplate automobiles have more local content. Legislation was introduced in Congress to require minimum local content by automakers. In 1981, the United Automobile Workers (UAW) launched a campaign to achieve legislation requiring that automakers selling more than 100,000 cars per year in the United States be required to include minimum domestic content percentages in parts and labor. Although none of these bills were enacted, their mere discussion could have influenced foreign-based manufacturers to increase production in the United States.

Three basically identical bills (S.707, H.R. 1234, and H.R. 4115), all subtitled the "Fair Practices in Automotive Products Act," were introduced in 1983 in the 98th Congress to "establish domestic content requirements for motor vehicles sold or distributed in interstate commerce in the United States." They called for a U.S. Automobile Industry Advisory Council within the DOT to assist in formulating a strategy to increase the domestic production of automotive products for sale and distribution in interstate commerce. The bills provided for a membership of five consumer representatives on such council.

The bills set forth for all motor vehicle manufacturers which produce over 100,000 motor vehicles for ultimate retail sale in the United States "minimum domestic content ratios" (the domestic value, including labor and parts, of the manufacturer's production costs of all automotive products sold in the United States). The bills established penalties for a vehicle manufacturer who failed to meet the minimum domestic content ratio beginning with the first model year following January 1, 1984. The penalties would reduce imports of vehicles and auto parts by the percentage point difference between the manufacturer's actual and required domestic content.

The bills required all such manufacturers to provide information to the DOT for the purposes of administering this requirement. They required the DOT and the Federal Trade Commission to study the effectiveness and impact of this legislation on the purchase of auto parts, and on employment at dealerships. The bills allowed the Secretary of Transportation to terminate the Act if the Secretary found that injuries to domestic industries had been prevented or remedied. Finally, the bills required the DOT to appoint a government task force to study the impact of currency exchange rates on vehicle manufacturers and the sale of automotive products.

In 1985, the House of Representatives bill H.R. 1050 was introduced in the 99th Congress, (but not enacted into law), also called the "Made in America Act." The bill proposed to limit the quantity of imported motor vehicles to 15 percent of the number of motor vehicles (domestic and foreign) sold in the United States during the prior year, as determined by the Department of Commerce (excluding motor vehicles imported by U.S.-based automobile manufacturers from their Canadian subsidiaries). The bill imposed civil penalties for violations of the import restrictions. The bill required the Secretary of Commerce to report annually to Congress on the impact of this Act, and to terminate the limitations after December 31, 1990 if injury to the domestic industry had been prevented or remedied.

A wave of transplants and joint ventures Starting in 1983, the other Japanese manufacturers followed Honda in establishing transplant factories, or they began to enter into joint ventures with the Big 3. General Motors and Toyota signed a Memorandum of Understanding to build a subcompact car at a former GM plant in Fremont, California. In 1984, New United Motor Manufacturing, Inc. (NUMMI) was formally established as a 50-50 joint venture and began passenger car production. In 1991, NUMMI expanded production to pickup trucks, all of which are sold by Toyota.

In 1983, Nissan opened a plant in Smyrna, Tennessee, to build pickup trucks. Nissan expanded production to passenger cars in 1985 in Smyrna, and began engine production at the plant in 1989. In 1997, Nissan Powertrain Assembly began production of engines and transaxles in Dechard, Tennessee to supply its cars and trucks.

In 1987, AutoAlliance International, Inc., a joint venture between Mazda and Ford, announced the purchase of a Ford manufacturing facility in Flat Rock, Michigan, and began production of passenger cars. Ford increased its 25 percent share in Mazda to 33.4 percent in 1996, and a former Ford executive was named president of Mazda.

In 1988, Toyota opened a car manufacturing plant in Georgetown, Kentucky. In 1989-1991, Toyota expanded production in Kentucky with axles and engines, and since then added minivan production. In 1998, Toyota Motor Manufacturing, Indiana, Inc. began production of full-sized pickup trucks in Princeton, Indiana, and expanded to SUVs. The same year, Toyota Motor Manufacturing, West Virginia, Inc. began production of engines at its new plant in Buffalo, West Virginia. Production of transmissions will be added at this plant in 2001.

In 1988, Diamond-Star Motors Corporation, a joint venture between Mitsubishi and Chrysler (who owned 24 percent of Mitsubishi), began production of passenger cars in Bloomington-Normal, Illinois. In 1995, Mitsubishi purchased Chrysler's share in Diamond-Star Motors and became the sole owner.

In 1989, General Motors of Canada, Inc. and Suzuki Motor Corporation of Japan began production of a passenger car in Ingersoll, Canada, which offered Suzuki the opportunity to access the North American market.

In 1989, Subaru-Isuzu Automotive, a joint venture of Fuji Heavy Industries and Isuzu Motors Limited (GM owned 34.2 percent of Isuzu) began production of passenger cars and a pickup truck in Lafayette, Indiana. GM increased its ownership of Isuzu to 37.5 percent. In 2000, DMAX Ltd., a GM and Isuzu joint venture, 60 percent owned by Isuzu, will produce engines in Moraine, Ohio.

The consolidation trend continued into the 1990s when Daimler-Benz and Chrysler merged, Ford Motor Co. acquired Volvo's car division, General Motors purchased 50 percent of Saab, Ford purchased Jaguar, and BMW took over Rover. In 2000, DaimlerChrysler purchased 34 percent of Mitsubishi Motors.

Special rules for trucks The Big 3 have long held a higher market share for pickup trucks and vans than for passenger cars. While consumer preference for Big 3 trucks is a factor, long-standing regulations concerning the import of trucks should also be considered. These rules could have influenced Japanese manufacturers to transplant the production of pickup trucks to the United States, more so than SUVs.

In 1962, the United States accused the European Community of unfairly restricting imports of American poultry at the request of the West German poultry industry. Partly because American imports of Volkswagen vans from West Germany were close in dollar value to the lost sales of American chickens exported to Europe, the United States retaliated in 1963 by imposing a 25 percent duty on imports of light trucks[21] - the so-called "chicken tax." Prior to this proclamation, imported trucks had been subject to a tariff of 8.5 percent (and cars, 2.9 percent). The 25 percent tariff has been retained in some form even though the poultry dispute was resolved long ago.

During the 1970s, Japanese manufacturers could avoid the 25 percent tariff by shipping cab-chassis units without the cargo bed, which were assessed a 4 percent import duty. In the United States, a bed was attached to the chassis. However, on May 20, 1980, the Treasury Department ruled that cab-chassis units were trucks for the purposes of tariff classification, and were subject to the 25 percent tariff rate. By then, nearly all imported trucks came from Japan.

Another opportunity for avoiding the 25 percent tariff hinged on the definitions of "trucks" and "passenger vehicles." Subaru installed two seats in a cargo bed and Customs classified the hybrid vehicle as a passenger car with a 2.9 percent tariff rate. In 1987, however, the Isuzu Trooper II four-wheel-drive SUVs imported from Japan were held by Customs officials in U.S. ports while they were stripped of rear seat belts and factory installed carpet in the cargo area. Customs import specialists determined that the Trooper II would have been classified as a passenger car under Isuzu's allocation in the Japanese VRA. The switching of classification by cosmetically altering a passenger car and truck to circumvent the automobile VRA came under increasing scrutiny by Customs officials.

On February 16, 1989, the Treasury Department announced that vans with rear side windows and at least one rear door plus front and rear passenger seats were to be classified as passenger vehicles subject to a 2.5 percent duty. This ruling was to prevent manufacturers from cosmetically changing the classifications of vehicles. SUVs were also classified as passenger vehicles if they had four doors. The new ruling eased the import of vans and SUVs (with four

[21]Presidential Proclamation 3564.

doors) into the United States while maintaining a high tariff on conventional pickup trucks. As of 1998, few pickup trucks, but large numbers of SUVs are imported into the United States from overseas. As explained above, Nissan and Toyota invested heavily in plants in the United States to build pickup trucks; Mazda and Isuzu sell Big 3-built pickup trucks under license; and Mitsubishi phased out the sale of pickup trucks in the United States.

Incentives The enacted or proposed Federal measures discussed so far spurred transplants indirectly, by regulating imports. However, State and local incentives packages that entail tax abatements, infrastructure improvements and employee training have directly encouraged foreign automakers' investment in U.S. manufacturing facilities.

Today, incentives have tripled since 1978 when Pennsylvania gave Volkswagen an incentive package of $86 million to locate in a region that was seriously affected by economic downturns. Tennessee followed with similar packages for Nissan, as did Kentucky for Toyota, and Ohio for Honda. In 1992, BMW received $150 million to locate a plant in Spartanburg, South Carolina, where it builds passenger cars and the new Sport Activity Vehicle. In 1993, Mercedes Benz received commitments from Alabama of $253 million for its plant in Tuscaloosa, Alabama, where it builds the M-Class SUV. In 1999, Alabama gave a an incentive package of $158 million to Honda to build a new plant in Lincoln, where it will produce minivans or SUVs, or both.

Effects of currency fluctuations Movements in the value of foreign currencies against the dollar significantly affected the decisions of automakers to relocate manufacturing facilities worldwide. Fluctuations in currency exchange rates between the yen and the dollar influenced the shift of foreign-owned production facilities to the United States in the later 1980s.

With the dollar strong and the Japanese yen weak until the mid-1980s, production of automobiles in Japan was cheaper than in the United States. At that time, the Japanese automobiles built in Japan and exported to the United States enjoyed a cost advantage of roughly $2,000 when compared to a similar U.S.-built auto. Much of this cost advantage is attributed to currency exchange and manufacturing costs.

After 1985, the yen appreciated significantly and operations in the United States held a cost advantage over producing automobiles in Japan and exporting to the United States. Once the cost advantage of producing in the United States was established, the number and scope of foreign-owned operations accelerated. Japanese parts suppliers invested heavily in the United States and relocated to supply the transplant operations. The movement of parts manufacturers to supply the transplant operations has effectively removed foreign-owned manufacturers from the vagaries of currency fluctuations and insulated the automakers and auto parts suppliers from losses attributed to currency swings. Thus, the 1980's decisions to move operations to the United States have a strong momentum of their own, and were not easily reversed even when the yen weakened.

The yen's fall in value relative to the dollar since mid-1995 (from a high of 80 yen to the dollar in mid-1995 to nearly 150 yen/dollar in mid-1998) means that Japanese vehicles and parts imported into the U.S. are once again less expensive, and Japanese auto manufacturers resumed importing somewhat larger numbers of vehicles, but without reducing their large production of transplants. In the last few years, an economic turnaround in Japan and a stronger yen encouraged Japanese manufacturers to continue investing in the United States.

Opportunities in Mexico All Big 3 automakers and many leading U.S. automotive parts suppliers have manufactured in Mexico for a long time, but exports from Mexico to the United States have only surged in recent years. In the mid- to late 1970s, Big 3 automakers faced increased competition from Japanese automakers and opened production-sharing operations in Mexico to take advantage of the *maquiladora* program. A *maquiladora* is a factory that assembles a product in Mexico from mostly U.S. components and exports most of the assembled product back to the United States. The 1989 Maquiladora Decree (initially called the Border Industrialization Program when it began in 1965) allowed for the duty-free importation of foreign merchandise into Mexico on a temporary basis, where it is assembled, manufactured or repaired and then exported either to the country of origin or to a third country, and allowed for 100 percent foreign ownership. U.S. automotive manufacturers and auto parts suppliers were among the leading users of the *maquiladoras*, taking advantage of lower wage rates, lower overhead and utility costs, and low transportation costs due to proximity to the United States. The *maquiladora* program will formally end under the North American Free Trade Agreement (NAFTA), and *maquiladoras* will operate in the same manner as any other Mexican firm by January 1, 2001.

Exchange rate fluctuations further encouraged automakers to step up operations in Mexico. The devaluation of the Mexican peso on international currency markets in December 1994 and the subsequent slump of the Mexican economy in 1995 resulted in a drop in U.S. exports of automobiles and automotive parts to Mexico, but it had the opposite effect on U.S. imports from Mexico. A healthy economy in the United States enabled automotive producers in Mexico to increase their exports to the U.S. The recent stabilization of the peso along with increased consumer confidence in Mexico is expected to lead to more joint ventures between U.S. and Mexican automotive parts suppliers as they seek to modernize their plants, and presumably, increase exports of autos and auto parts to the United States.

On January 1, 1994, the North American Free Trade Agreement was implemented. NAFTA provides for the elimination of tariff and most nontariff barriers over a 10-year period. NAFTA extends to Mexico the agreements made by Canada and the United States in 1965 and 1989 (see below). NAFTA has enabled U.S. automotive producers to increase and rationalize their manufacturing facilities in Canada and Mexico, improving their productivity and profitability. Specifically, pickup trucks assembled in Mexico were no longer subject to the 25 percent tariff, and could profitably be sold in the United States. Manufacturers have responded by adding plants in Mexico and increasing capacity. Foreign automakers, such as Volkswagen which has a plant in Puebla, Mexico, supply largely to the North American market.

Benefits of "globalization" Even aside from tariffs, import restrictions, currency fluctuations, State incentives, etc., foreign-based manufacturers have intrinsic economic and marketing reasons to set up transplant factories in North America and to increase the content of North American parts in their transplant vehicles. Transportation costs can be saved by assembling vehicles where the customers are and obtaining parts and raw materials close by where the vehicles are assembled. Production in the customers' country enables the foreign-based company to become more familiar with local consumer preferences, draw on local engineering and marketing know-how, and produce a more saleable vehicle. For example, the 1998 Toyota Sienna minivan, produced at the Georgetown, Kentucky plant and based on the Camry platform that is very popular in the United States, has far outsold its predecessor, the imported Previa. Transplant enterprises help the companies draw on local sources of credit and eases entry into joint ventures with North American companies. By becoming more "global," the foreign-based manufacturers hope to grow and become profitable. This is a long-term, persistent trend.

U.S.-Canada trade agreements It is appropriate to conclude this section with an overview of the trade agreements that fostered a special relationship between the U.S. and Canadian automotive industries, with massive exchanges of vehicles and parts. The U.S.-Canada Automotive Products Trade Act of 1965 (APTA) was aimed at expanding automotive trade between the U.S. and Canada by granting duty-free treatment to imports between the United States and Canada for specified motor vehicles and parts for use as original equipment in the manufacture of these motor vehicles. Direct investment expenditures on plant and equipment in Canada by the Canadian affiliates of GM, Ford, and Chrysler increased substantially after the APTA became effective.

On January 1, 1989, the U.S.-Canada Free Trade Agreement (CFTA) became effective, retaining the duty-free provisions of APTA. Under the agreement, all qualifying trade between the United States and Canada would be free of duty as of January 1, 1998, and the 10-year phase-in of staged duty reductions for all tariff barriers would be eliminated. In addition, the CFTA addressed concerns of U.S. automakers by disallowing foreign auto companies from assembling cars in Canada using Canadian auto parts, then shipping duty-free to the U.S. The agreement also established a bilateral panel to assess the state of the North American automotive industry and to propose public policy measures and private initiatives to improve the competitiveness of the industry in domestic and foreign markets. The United States and Canada are one another's principal trading partners, and much bilateral trade is generated by intracompany shipments by General Motors, Ford and Chrysler. As was discussed above, NAFTA has now extended the special relationship to Mexico, but only in the last few years.

1.3 The U.S.-Japan Agreement on Autos and Auto Parts

So far, we have discussed measures and trends that preceded the AALA by up to 25 years, spurred the growth of transplant factories, and somewhat indirectly or implicitly boosted the USCan parts content of the transplants. Now let us consider one measure that nearly coincided with the AALA and quite explicitly called for higher USCan parts content in transplants.

On June 28, 1995, the United States and Japan signed the U.S.-Japan Agreement on Autos and Auto Parts, a five-year comprehensive agreement covering all aspects of bilateral automotive trade - motor vehicles, automotive parts, and Government of Japan regulation of the automotive aftermarket. The agreement was intended to address difficulties experienced by U.S. firms in accessing Japan's vehicle distribution system, eliminating regulations on the automobile parts aftermarket in Japan, and improving opportunities for U.S. original equipment parts suppliers in Japan, and with Japanese transplants in the United States.

As part of the Agreement, the United States negotiated 17 objective criteria to evaluate progress in the three main areas addressed in the negotiations. Three criteria specifically pertain to market access for original equipment parts:

(1) Japanese vehicle manufacturers in Japan and their transplants are to broaden suppliers' opportunities through design-in and supplier outreach programs, localization of R&D, and transparency in purchasing practices. The goal is to ensure that new suppliers in the United States will have access to the market for parts procurement by the Japanese automakers and their transplants. New suppliers will be given the opportunity to obtain business at the "design-in phase" and transplant R&D, engineering, and procurement facilities are located in the United States.

(2) Japanese vehicle manufacturers and Japanese transplant vehicle manufacturers must make an effort to purchase parts without discrimination against suppliers based on capital affiliation. The goal of this is to ensure that U.S. parts suppliers are not discriminated against with respect to parts procurement when they sell to Japanese transplants.

(3) Japanese vehicle manufacturers must make an effort to change the extent of local parts sourcing, considering data on purchases of parts made in the United States and vehicle production by Japanese transplant vehicle manufacturers in the United States.

The U.S. Government established an Interagency Enforcement Team to monitor progress under the Agreement. The Team is co-chaired by the Department of Commerce and the Office of the U.S. Trade Representative. The Team has relied heavily upon the numerical scores on the AALA labels to track the USCan content of transplant and import vehicles produced by Japan-based companies. They have also used data from the U.S. Customs Service, the Japanese Automobile Manufacturers Association and various U.S. manufacturer associations for this purpose at times.

On April 18, 1997, the Interagency Enforcement Team issued a report to the President evaluating progress under the agreement[22]. Results stated that, "measured by parts purchasing data supplied by the Japanese Automobile Manufacturers Association, purchases of U.S.-made parts by the transplants rose by slightly over 6 percent in value in the first half of JFY 1996[23], to an annual rate of $18.4 billion. Taking into consideration a decline in transplant production, this rate represents a rebound from 1995 levels. Based on American Automobile Labeling Act (AALA) calculations, the North American parts content of U.S.-produced Japanese vehicles rose from a production-weighted 47.6 percent in model year 1995 to 52.4 percent in model year 1997. The Japanese automakers continue to make progress in implementing their 1995 global business plans. In the United States, these companies are expanding the production of passenger cars, light trucks, and

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[22]*Report to President William Jefferson Clinton of the Interagency Enforcement Team Regarding the U.S.-Japan Agreement on Autos and Auto Parts*, U.S. Department of Commerce and the Office of the U.S. Trade Representative, Washington, 1997.

[23]Japanese Fiscal Year, ending March 31, 1996.

major components, such as engines and transmissions–thereby creating sales opportunities for U.S. parts suppliers and increasing employment of U.S. workers."[24]

The 1997 report indicated that a survey conducted by four major U.S. parts associations (Automotive Parts and Accessories Association, Automotive Service Industry Association, Motor and Equipment Manufacturers Association, and Specialty Equipment Market Association), show continued modest growth in U.S. original equipment (OE) suppliers' business with Japanese transplants in North America. Forty percent of the firms responding that attempt to sell to transplants characterize their progress as "significant" or substantial," 25 percent as "modest," and 35 percent as "limited" or "none." These statistics show an improvement over the assessment level from a previous survey in 1996. In addition, the results of the survey indicated that fewer than 3 percent of the respondents expect sales in both the United States and Japan to decline, while more than half of the remaining 97 percent expect business to grow. The remaining respondents expect sales to Japanese transplants to account for about 16 percent of their total OE sales by 1999, up from 14 percent in 1996.

On August 12, 1998, the Interagency Enforcement Team issued the fifth semi-annual monitoring report to the President regarding the U.S.-Japan automotive agreement.[25] The report noted that in Japan fiscal year 1997, investment by the Japanese automakers in new production facilities in the United States has displaced automotive imports from Japan, creating tens of thousands of jobs for U.S. workers, and increasing the purchases of U.S. auto parts by Japanese transplants by 10 percent. Imports of parts from Japan continued to decline, largely due to Japanese transplants substituting auto parts imported from Japan with U.S. parts, according to the report.

The report stated that the Japanese transplant levels of USCan content have increased significantly from 47.6 percent in MY 1995 to 59.4 percent in MY 1998, using AALA data.[26] These percentages agree closely with the findings of our own evaluation (see Section 2.4, "True Transplants").

The report included a presentation of domestic and foreign auto parts purchases by Japanese automakers in Foreign Trade Zones (FTZ). Foreign Trade Zones are areas under U.S. Customs supervision located in the United States that are considered outside the customs territory of the United States for tariff purposes. Every passenger vehicle plant in the United States is located in an FTZ. Products entering the U.S. customs territory after assembly in an FTZ can be assessed duty rates in one of several ways in order to obtain the most favorable duty treatment on parts incorporated into the finished product. Foreign Trade Zone regulations by the U.S. Department

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[24]*Report to President William Jefferson Clinton* (1997), pp. 6, 30.

[25]*Report to President William Jefferson Clinton of the Interagency Enforcement Team Regarding the U.S.-Japan Agreement on Autos and Auto Parts*, U.S. Department of Commerce and the Office of the U.S. Trade Representative, Washington, 1998.

[26] The weighted average calculations include averaging both North American-built and overseas-built vehicles of the same carline.

of Commerce require that automakers report the value of parts shipped into the FTZ from U.S. locations ("domestic status inputs"), as well as the value of parts imported from foreign countries ("foreign status inputs") annually to the Commerce Department. These data on Japanese automakers' reports on domestic status inputs are used to monitor trends in the purchases of U.S. parts by Japanese transplants, and to estimate the percentage of domestic content of Japanese transplant production. It should be noted that FTZ data tend to overstate the value of domestic content as they include parts imported from Canada under the APTA/CFTA and parts imported into the United States under normal customs procedures and then shipped to the FTZ.

FTZ data indicate that domestic content of transplant vehicles grew from 57.1 percent in United States fiscal year (FY) 1992 to 61.8 percent in FY96. FTZ data also show that the value of domestic purchases by the seven Japanese transplant automakers increased by 84.4 percent from $9.0 billion in FY92 to nearly $16.6 billion in FY96.

The report also noted that data from the Japanese Automobile Manufacturers Association show an increase in Japanese purchases of U.S. original equipment automotive parts from $16.4 billion in JFY95 to $18.92 billion in JFY97.

A major finding in Chapter 2 of this NHTSA evaluation report (as well as in the Interagency Enforcement Team report discussed here) is that USCan content increased substantially in the transplant vehicles of Japanese-based companies from 1995 to 1998, subsequent to the nearly simultaneous implementation of the AALA and the Trade Agreement. Under the circumstances, it is virtually impossible to quantify how much of the effect should be attributed to the AALA labels, how much to the Trade Agreement, and how much to the continuing effect of earlier measures and trends described in Section 1.2. Nevertheless, the strong, explicit terms of the Trade Agreement and the current near absence of consumer interest in the numerical scores of the AALA (see Section 6.6) intuitively suggest that the Trade Agreement has had more direct effect than the AALA labels. Furthermore, a major shift in production or parts-sourcing cannot be implemented overnight. The response of the Japanese-based companies in 1995-98 must, to some extent, already have been in the planning stages for some time. That suggests the earlier measures were influential, too. Ironically, even though the numerical scores on the AALA labels have so far been of little direct use to consumers, they have been quite useful to the Interagency Enforcement Team that monitors progress under the Trade Agreement.

1.4 AALA requirements

The American Automobile Labeling Act was part of the Department of Transportation and Related Agencies Appropriation Act for Fiscal Year 1993, P.L. 102-388. The AALA provides that all new passenger cars (regardless of weight), certain small buses, and all trucks and multipurpose passenger vehicles with a gross weight rating (GVWR) of 8,500 pounds or less, manufactured on or after October 1, 1994, bear labels providing information about the value of the USCan and other parts content of each vehicle.

The AALA amends Title II of the Motor Vehicle Information and Cost Savings Act (Cost Savings Act) by adding a new section 210. On July 5, 1994, the President signed a bill (P.L. 103-

272) which revised and codified "without substantive change" the Cost Savings Act. The content labeling provisions, which formerly existed as section 210 of the Cost Savings Act, are codified at 49 U.S.C. § 32304, Passenger motor vehicle country of origin labeling. On July 21, 1994, the National Highway Traffic Safety Administration (NHTSA) published in the Federal Register (59 FR 37294) a new regulation, 49 CFR Part 583, Automobile Parts Content Labeling, to implement the American Automobile Labeling Act.

Section 32304, "Passenger Motor Vehicle Country of Origin Labeling" requires passenger motor vehicles[27] manufactured on or after October 1, 1994 to be labeled with information about the countries of origin of vehicles and parts. The purpose of the section is to enable consumers to take this information into account in deciding which vehicle to purchase.

The following presents the AALA as it was in effect during model years 1995-98, the time frame of this evaluation report.[28] Section 32304 (b) requires each new passenger motor vehicle to be labeled with the following five items of information:

1) The percentage USCan equipment (parts) content;
2) The names of any countries[29] other than the U.S. and Canada which individually contribute 15 percent or more of the equipment content, and the percentage content for each such country;
3) The final assembly place by city, state (where appropriate), and country;
4) The country of origin of the engine; and
5) The country of origin of the transmission.

Section 32304 (b) specifies that the first two items of information, the equipment content percentages for the U.S./Canada and other countries, are calculated on a "carline" basis rather than for each individual vehicle. The term "carline" refers to a name of a group of vehicles which has a degree of commonality in construction, e.g., body, chassis.

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[27]The term "passenger motor vehicle," defined in section 49 U.S.C. 32101 as a motor vehicle with motive power, designed to carry not more than 12 individuals, was amended for purposes of section 32304 to include any "multipurpose passenger vehicle" and "light duty truck" that is rated at not more than 8,500 pounds gross vehicle weight rating or less. Thus, the motor vehicle content labeling requirements apply to passenger cars, pickup trucks, SUVs, vans, and small buses up to 8500 GVWR. Motorcycles are excluded.

[28]On July 28, 1999, NHTSA published in the Federal Register (64 FR 40777) a final rule amending the regulation implementing the AALA. These changes are described in Section 1.7 of this evaluation, "Recent amendments to the AALA."

[29]If there are more than two such countries, only the names of the two countries providing the greatest amount of content need be listed.

Manufacturers of passenger motor vehicles are required to establish the required information annually for each model year, and are responsible for the affixing of the label to the vehicle. Dealers are responsible for maintaining the labels.

The AALA information "may be either part of the Monroney price information label required by 15 U.S.C. 1232, part of the fuel economy label required by 15 U.S.C. 2006, or a separate label. A separate label may include other consumer information" (49 CFR Part 583.5).

In order to calculate the information required for the label, the vehicle manufacturer must know certain information about the origin of each individual part or component used to assemble its vehicles. For example, in order to calculate the information for the first item of the label, i.e., the percentage of the value of the motor vehicle equipment installed on passenger motor vehicles within a carline which originated in the U.S./Canada, the manufacturer must know the USCan content of each individual part or component.

The statute specifies that suppliers of passenger motor vehicle equipment must provide information about the origin of the equipment they supply. For purposes of determining the USCan origin for the first item on the label, the statute provides different procedures depending on whether equipment is received from an allied supplier (a supplier wholly owned by the manufacturer, or, in the case of a joint venture assembly arrangement, any supplier wholly owned by one member of the joint venture arrangement) or an outside supplier (a non-allied supplier of passenger motor vehicle equipment to a manufacturer's allied supplier, or anyone other than an allied supplier who ships directly to the manufacturer's final assembly point).

For equipment received from outside suppliers, section 32304 (a) (9) (A) provides that the equipment is considered USCan if it contains at least 70 percent value added in the U.S./Canada. Thus, any equipment that is at least 70 percent USCan is valued at 100 percent USCan, and any equipment under 70 percent is valued at zero percent. This statutory provision is sometimes referred to as the "roll-up, roll-down" provision.[30] For equipment received from allied suppliers, section 32304 (a) (9) (B) provides that the actual amount of USCan content is used.

The statute requires the Department of Transportation to promulgate regulations implementing the content labeling requirements. Section 32304 (d) requires the promulgation of regulations which specify the form and content of the required labels, and the manner and location in which

[30]The "roll-down" portion of the Act was eliminated under section 7016 (d) (1) (C) of TEA-21. While equipment from an outside supplier that is at least 70 percent USCan is still to be valued at 100 percent USCan, any equipment under 70 percent is valued, and must be reported, to the nearest five percent. For example, 38 percent would be reported to the manufacturer as 40 percent, rather than zero as under current law. NHTSA issued a final rule on July 28, 1999 (64 FR 40777) amending the regulation to be consistent with the revised Act, effective June 1, 2000. However, during the period in which this evaluation was conducted the Department of Transportation had not yet amended 49 CFR § 583.6 and § 583.10 to conform to the amended AALA; the elimination of the "roll-down" portion and the subsequent amended procedures for calculating USCan parts content did not affect our surveys.

the labels must be affixed. Section 32304 (e) requires promulgation of such regulations as may be necessary to carry out the labeling requirements, including regulations to establish a procedure to verify the required labeling information. That section also directs that such regulations provide the ultimate purchaser of a new passenger motor vehicle with the best and most understandable information possible about the USCan or other origin of the equipment of such vehicles without imposing costly and unnecessary burdens on the manufacturers. Finally, section 32304 (e) also specifies that the regulations include provisions requiring suppliers to certify whether their equipment is of U.S., USCan, or other origin.

On July 21, 1994, the National Highway Traffic Safety Administration published in the Federal Register (59 FR 37294) a final rule establishing a new regulation, 49 CFR Part 583, Automobile Parts Content Labeling, to implement the American Automobile Labeling Act. The regulation established requirements for: 1) manufacturers of passenger motor vehicles; 2) suppliers of motor vehicle equipment used in the assembly or passenger motor vehicles; and 3) dealers of passenger motor vehicles. A summary of the requirements is set forth below.

<u>Requirements for manufacturers of passenger motor vehicles</u> Vehicle manufacturers are required to affix to all new passenger motor vehicles a label which provides the following information:

1) USCan Parts Content[31] – the overall percentage, by value, of the passenger motor vehicle equipment that was installed on vehicles within the carline of which the vehicle is part, and that originated in the United States and/or Canada.
2) Major Sources of non-USCan Parts Content -- the names of the two countries, if any, other than the United States and Canada which contributed at least 15 percent of the average overall percentage, by value, of the passenger motor vehicle equipment installed on vehicles within the carline of which the vehicle is part, and the percentage attributable to each such country (if there are more than two such countries, the manufacturer need only provide the information for the two countries with the highest percentages).
3) Final Assembly Point -- the city, state (in the case of vehicles assembled in the United States), and country of the final assembly point of the passenger motor vehicle.

[31]For the past several years, NHTSA has provided a limited, temporary provision in the § 583.6 (c) (6) content calculation procedures to give a vehicle manufacturer added flexibility in making content determinations in those instances in which outside suppliers have not responded to the manufacturer's requests for content information. In order to conform Part 583 with section 7106 (d) (4) NHTSA removed the time limitation in the amended final rule (64 FR 40777) published July 28, 1999. In the changed regulation, if a manufacturer or allied supplier requests information in a timely manner from one or more of its outside suppliers concerning the USCan content of particular equipment, but does not receive that information despite a good faith effort to obtain it, the manufacturer or allied supplier may make its own good faith value added determinations, for no more than 10 percent, by value, of a carline's total parts content from outside suppliers. The amended regulation was not in effect at the time of the surveys.

4) Country of Origin for the Engine Parts[32] [33]– the country of origin of the passenger motor vehicle's engine.
5) Country of Origin for the Transmission Parts -- the country of origin of the passenger motor vehicle's transmission.

The label is also required to include a statement below this information reading as follows:

> Note: Parts content does not include final assembly, distribution, or other non-parts costs.

Manufacturers are permitted, but not required to provide at the end of the note the following additional statement for carlines assembled in the U.S. and/or Canada, and another country:

> This carline is assembled in the U.S. and/or Canada, and in [insert the name of each other country]. The USCan parts content for the portion of the carline assembled in [insert name of country, treating the U.S. and Canada together, i.e., U.S./Canada] is [ ]%.[34]

The information for items 1) and 2) of the label is calculated, prior to the beginning of the model year, for each carline. The information for items 3), 4), and 5) is determined for each individual vehicle. However, the country of origin for groups of engines and transmissions is determined once a model year.

Vehicle manufacturers are to calculate the information for the label, relying on information provided to them by the suppliers. Under the final rule, manufacturers and allied suppliers are required to request their suppliers to provide the relevant content information specified in Part 583, and the suppliers are required to provide them the specified information in response to such requests. The vehicle manufacturers are required to maintain records of the information used to determine the information provided on the labels.

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[32]NHTSA amended 49 CFR § 583.5 so that the wording of the vehicle content label would no longer use the terms "Engine Parts" and "Transmission Parts." It would instead use the terms "Engine" and "Transmission." The changes did not affect the study since they were not in effect at the time during which the study was conducted.

[33]NHTSA amended 49 CFR § 583.8, procedure for determining country of origin for engines and transmissions, according to section 7106 (d) (1) (A). Assembly and labor costs incurred for the final assembly are now to be included in making country of origin determinations for engines and transmissions. The changes did not affect the study since they were not in effect at the time during which the study was conducted.

[34]In order to conform to new requirements in section 7106 (d) 2, NHTSA added to § 583.5 an additional option permitting manufacturers to voluntarily identify USCan parts content based on the country in which the vehicle was assembled.

For each year, manufacturers shall submit to the Administrator of the National Highway Traffic Safety Administration three copies of the information required by §583.5 (a) to be placed on a label for each carline. The information for each carline shall be submitted not later than the date the first vehicle of the carline is offered for sale to the ultimate purchaser.

For model year 1995 vehicles and model year 1996 vehicles which are offered for sale to ultimate purchasers before June 1, 1995, manufacturers and suppliers may, instead of following the detailed calculation procedures set forth in the regulation, use procedures that they expect, in good faith to yield similar results.

Manufacturers of passenger motor vehicles are required to establish the required information annually for each model year, and are responsible for the affixing of the required label to the vehicle.

In the final rule, NHTSA excluded all final stage manufacturers,[35] as well as businesses that produce a total of fewer than 1,000 passenger motor vehicles for sale in the United States annually from providing items 1 and 2 of the label (the two items that are determined on a carline bases). However, these manufacturers are required to provide items 3, 4, and 5 of the label.

Requirements for suppliers of motor vehicle equipment For any equipment that an outside supplier (a supplier not wholly owned by the vehicle manufacturer) supplies to a vehicle manufacturer, a supplier wholly owned by the vehicle manufacturer (an allied supplier) or, in the case of a joint venture vehicle assembly arrangement, a supplier that is wholly owned by one member of the joint venture arrangement, the outside supplier is required to provide, at the request of that manufacturer or allied supplier, the following information:

1) The price of the equipment to the manufacturer or allied supplier;
2) Whether the equipment has, or does not have, at least 70 percent of its value added in the U.S. and Canada;
3) For any equipment for which the USCan content is less than 70 percent, the country or origin of the equipment (treating the U.S. and Canada together);
4) For equipment for which the USCan content is less than 70 percent, the country of origin of the equipment (separating the U.S. and Canada).

For any equipment that an allied supplier supplies to a vehicle manufacturer, the supplier is required to provide, at the request of the manufacturer, the following information:

1) The price of the equipment to the manufacturer;
2) The percentage USCan content of the equipment;
3) The country of origin of the equipment (treating the U.S. and Canada together);
4) For equipment that may be used in an engine or transmission, the country of origin of the equipment (separating the U.S. and Canada).

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[35]Final stage manufacturer means a person who performs such manufacturing operations on an incomplete vehicle that it becomes a completed vehicle.

A supplier of engines and transmission is, in addition to the above requirements, required to provide, at the request of the vehicle manufacturer, the country of origin for each engine or transmission it supplies to the manufacturer, in the form of a certification. Outside suppliers that directly supply to allied suppliers are required to provide the specified information and certification directly to the allied suppliers. Suppliers are also required to maintain records of the information used to compile the information provided to the manufacturers and outside suppliers.

The requirements apply only to suppliers which supply directly to the vehicle manufacturer or to an allied supplier. No requirements are imposed on suppliers earlier in the chain, e.g., a company which supplies an item of equipment to an outside supplier which then supplies it to a vehicle manufacturer.

Requirements for dealers of passenger motor vehicles Dealers are required to maintain the label on each vehicle until the vehicle is sold to a consumer. Dealers may temporarily remove separate content labels (but not if they are part of the Monroney price sticker label or the fuel economy label) for purposes of test drives or for moving vehicles in intra-dealer exchanges if each of the following conditions is met:

1) The manufacturer advises that the label can be removed and replaced without damage;
2) The dealer removes the label immediately before each test drive or replaces it immediately before moving a vehicle in an intra-dealer exchange and replaces it immediately after such move;
3) The dealer advises the person taking the test drive about the existence of the label and offers the opportunity to inspect the label (either on or off the vehicle).

Dealers are not specifically required to have brochures or posters explaining the AALA labels, or to discuss the labels in sales presentations, or to provide any AALA-related information to consumers other than the labels themselves.

Certifications and records NHTSA permits certifications and other records to be submitted and retained electronically. The agency believes that this is consistent with the approach taken by the Federal government in related areas, and with requirements to establish regulations that avoid imposing unnecessary and costly burdens on the manufacturer. Manufacturers are required to maintain records for five years after December 31 of the model year to which the records relate. Suppliers are required to maintain all records which form the basis for the information it provides on the certificates including, but not limited to, calculations of content certificates from suppliers, and relevant information from manufacturers and suppliers. Suppliers must maintain records for six years after December 31 of the calendar year set forth in the date of each certificate.

On September 15, 1995, NHTSA published in the Federal Register (60 FR 47878) a revised final rule making several changes to the final rule in response to petitions for reconsideration of the agency's July 1994 final rule implementing the statute. The revised final rule will reduce the burdens associated with making content calculations and will also result in more accurate information. The amendments made by the rule were effective October 16, 1995. NHTSA made the following changes in the final rule:

1) If a supplier used material in producing passenger motor vehicle equipment which was produced or assembled in the U.S. or Canada, the supplier will subtract from that material, any value that was not added in the U.S. or Canada. The suppler can make a good faith estimate of the value that was not added in the U.S. or Canada. This can be based on information available to the supplier, e.g., information in its records, information it can obtain from its suppliers, the supplier's knowledge of manufacturing processes, etc. Suppliers cannot simply default to zero.
2) The supplier shall consider the amount of value added and the location in which that value was added:
   (a) From the time the supplier received the material back to and including two earlier stages where the material was changed into a new and different product with a different name, character, and use.
   (b) The value of materials used to produce a product in the earliest of these two stages will be treated as value added in the country in which that change occurred.

Recent amendments to the AALA As part of the NHTSA Reauthorization Act of 1998, Congress amended the AALA to make a number of changes in the labeling requirement. This Act is part of the Transportation Equity Act for the 21st Century (TEA-21), signed on June 9, 1998. These changes did not take effect during the 1995-98 time frame of this evaluation and are not reflected in any of the analyses of this report, but they could affect the findings if similar analyses were to be conducted in the future:

Section 7106 (d) (1) (A) of TEA-21 amends the AALA to specify that assembly and labor costs incurred for the final assembly of engines and transmissions are to be included in making the country of origin determination. Section 7106 (d) (1) (B) amends the definition of final assembly place. Section 7106 (d) (1) (C) amends the AALA to eliminate the "roll-down" portion of the provision. While equipment from an outside supplier that is at least 70 percent USCan is still to be valued at 100 percent USCan, any equipment under 70 percent must be reported to the nearest five percent. Section 7106 (d) (2) amends section 32304 (d) of the AALA to provide that a manufacturer's vehicle content label may include a line identifying the country in which the vehicle assembly was completed. The full text of TEA-21 and the conference report is available on the Web at http://www.fhwa.dot.gov/tea21.

1.5 Dissemination of AALA information

Neither the AALA nor the NHTSA regulation requiring the labels include any stipulation for disseminating this information to the public other than the labels themselves. As of 2000, NHTSA and other Federal agencies have not issued any brochures comparing AALA information by make-model, or placed such information on their Web sites. Compilations of AALA data were published in the *Automotive News Market Data Book*, a trade publication, in 1995 and 1996, but not in subsequent years. Unlike crash test results and fuel economy ratings, for example, they have not been published in popular journals such as *Consumer Reports*, *Car and Driver*, etc. Nor is NHTSA aware of their publication in the literature of non-Government organizations that promote the consumption of products made in the United States.

Several foreign-based manufacturers have advertised extensively that their vehicles are assembled in the United States and/or contain large proportions of U.S. parts. In particular, two manufacturers reported to NHTSA in our survey that they used brochures, newspaper ads, magazine ads, and/or television ads to advertise that they purchase parts and materials from U.S. suppliers, invest in U.S. manufacturing plants, and contribute to the U.S. economy in the form of direct jobs, and donations to charitable groups and educational organizations.

However, these two manufacturers did not explicitly state the percentage of domestic content in their vehicles in their media ads. NHTSA is not aware of any manufacturer that used AALA statistics to demonstrate an edge over their competitors (comparable to Audi's advertising that they had the best results on NHTSA's crash tests).

In 1994, the same two manufacturers produced brochures that presented sample parts content labels. Both brochures were critical of the government's methodology for counting parts and combining Canadian with United States parts in the numerical score. The two manufacturers found that none of their customers were interested in the label and they discontinued distribution of the consumer guides.

Chapter 6 of this report investigates, through a consumer survey, the current level of consumer awareness of the existence of the labels and the extent to which they understand the information on the labels and find it useful.

In this context, it should also be noted that country-of-assembly information was available to consumers before the AALA, but not necessarily in a standardized and conveniently accessible form like the AALA labels. Since model year 1981, the country of assembly can be decoded from the Vehicle Identification Number (VIN), but it is safe to say that few consumers would know how to decode it. The country of assembly is quite commonly specified on the Monroney price sticker, but it is not required there by law. It is often listed, but not mandatory, on the manufacturers' certification label (49 CFR Part 567) that is permanently affixed to the vehicle, usually on the rear edge of the driver's door. It may be assumed that few consumers peruse these certification labels before they buy vehicles. In recent years, organizations that supply information about passenger vehicles via the Internet often specify the country of assembly.

CHAPTER 2

TRENDS IN U.S./CANADIAN CONTENT AND ASSEMBLY, 1995-98

United States/Canadian (USCan) parts content, as specified in the labels placed on new vehicles in accordance with the American Automobile Labeling Act (AALA) did not rise during model years 1995-98. In fact, it declined from an average of 70 percent in model year 1995 passenger cars and light trucks, the first year of the labels, to an average of 67.6 percent in model year 1998. The principal reason for the overall decline was a reduction of USCan content - and a corresponding increase in Mexican parts content - in Big 3 cars and light trucks. But there were substantial gains in USCan content among the "transplant" vehicles. Similarly, the proportion of vehicles sold in the United States that were assembled in the United States or Canada declined from 82 percent in model year 1994 to 80 percent in 1998, primarily because more Big 3 vehicles are being assembled in Mexico.

These statistical analyses of this chapter, as well as Chapters 3 and 4, just aim to describe what actually happened to vehicle sales. They are not designed to identify cause-and-effect relationships or to attribute any of the observed sales trends specifically to AALA or to other regulations or international agreements.

2.1 The data base for studying U.S./Canadian content trends

Each manufacturer is required to notify NHTSA of the information that goes on the parts-content labels for each of their lines of passenger cars, pickup trucks, sport utility vehicles (SUV) and vans manufactured on or after October 1, 1994.[1] These letters, kept on file by NHTSA's Office of Vehicle Safety Compliance provide information on the USCan content of virtually every 1995-98 make-model in each model year. Phone calls to manufacturers filled the handful of gaps in the letters.

Several details about the labels are relevant. *Automotive News* and, possibly, other sources printed summaries of the label information for model years 1995 and 1996. There are a number of discrepancies between these listings and the official letters to NHTSA: in every case, this evaluation relies on the letters. The principal quantitative datum on the label is the percentage of the vehicle's parts and components that are of USCan origin; as explained in Section 1.4, labor and assembly are not included in the computation. The labels contain various data in addition to the percent of USCan parts, but none of the other data are considered in this chapter. Since the data on final assembly, engine and transmission only list countries by name, and do not specify what percent derives from each country, they are not suitable for quantitative analyses such as year-to-year computation of fleetwide averages. The percentage of parts from countries other than the United States or Canada is only reported for those countries that contributed at least 15

[1] *Code of Federal Regulations*, Title 49, General Printing Office, Washington, 1998, Part 583.

percent of the parts. Without data on contributions lower than 15 percent, it is impossible to calculate accurate fleetwide averages. In particular, it is impossible to measure the substantial increase in Mexican parts content that undoubtedly took place in Big 3 vehicles during 1995-98, since few models achieved more than 15 percent Mexican content.

Manufacturers are allowed certain leeways in computing the percentage of USCan parts value. As explained in Section 1.4, manufacturers could simplify the calculation for certain outside-supplied parts, counting them as 100% or 0% USCan ("roll-up" or "roll-down"), and they had permission to use "good-faith" estimates rather than calculations on up to 10 percent of the value of outside-supplied parts when these suppliers did not furnish data on the origin of the parts (and in model year 1995 they had permission to use "good faith" estimates for any information not provided by suppliers). Consequently, the USCan content percentages are estimates rather than exact numbers, and at least some of their year-to-year variation could be due to the estimation procedures.

New-vehicle sales or registration data by make-model and model year are needed to obtain fleetwide averages of USCan content. The analyses of this chapter are based on **registration** data from the New Car and Light Truck File that R. L. Polk supplies to NHTSA. The file counts how many new vehicles were registered in each month, by make-model, subseries and model year. It traces the registrations for vehicles of a specific model year, say 1995, from the time in 1994 when they were first offered to the public until the end of 1996 (1997 for trucks), by which time nearly all of them had been cleared from the dealers' lots. The sum of all these monthly initial registrations over the 3 or 4 year period is essentially equal to the total sales of that make-model-MY in the United States. Polk data from calendar years 1993 through June 1999 were available as of March 2000 and used to tally the MY 1994-98 registrations. (To the extent that about 1 percent of MY 1998 production was still unsold or unregistered as of July 1, 1999, the MY 1998 registrations are underreported by about 1 percent.)

The advantage of these registration data is that they can be made to correspond exactly to the information in the AALA letters. In both cases, the "model year" is the "production" model year, identified by the 10th character of the Vehicle Identification Number (VIN) and written on titles and registrations. Likewise, an exact correspondence was established between the make-model definitions in the AALA letters and on the Polk files. Those definitions were mapped into pairs of four-digit numerical codes as shown in Appendix A. The codes are similar to the ones used in earlier NHTSA evaluations[2] and indicate the specific make-model and the more general car/light truck group to which the make-model belongs.

The registration data were also compared to production data for model year 1995-98 passenger cars that the manufacturers have supplied to the Environmental Protection Agency for computing Corporate Average Fuel Economy (pursuant to 40 CFR 86.085-37). They specify the number of vehicles produced *for sale in the United States* during a production model year. When the Polk

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[2]Kahane, C.J., *Relationships between Vehicle Size and Fatality Risk in Model Year 1985-93 Passenger Cars and Light Trucks*, NHTSA Technical Report No. DOT HS 808 570, Washington, 1997, Appendix B.

registration data and the manufacturer-supplied data did not agree (in 6 percent of the make-model-year combinations), we used the manufacturer-supplied data.

To compute average USCan content for the entire fleet, or a subset, it makes more sense to take **value-weighted** rather than sales-weighted (or registration-weighted) averages. For example, if the fleet consists of one $20,000 car with 100 percent USCan content and one $80,000 car with 0 percent USCan content, the value-weighted average is

(100%x1x20,000 + 0%x1x80,000) / (1x20,000 + 1x80,000) = 20 percent

whereas the sales-weighted average is

(100%x1 + 0%x1) / (1 + 1) = 50 percent

Surely, the value-weighted average better expresses, in economic terms, the share of USCan parts in the total fleet. (Registration-weighted overall averages are also shown in Section 2.2, for comparison purposes.)

In order to compute value-weighted averages, it is necessary to have price as well as sales (registration) data by make-model and model year. Price data for model years 1994-98 are all taken from *Automotive News Market Data Books*, annual publications that list the current model year prices as of approximately April 1. These prices are defined the same way, year after year, except that destination charges were added starting in 1997, a one-time increase on the order of 2 percent. We used the lowest price listed for each make-model, the "base sticker price." This is not necessarily the same as the [unknown] average actual sales price: it excludes premiums for higher-priced subseries (especially for pickup trucks and luxury cars) or optional equipment, but it also excludes discounts that consumers received. Thus, the value-weighted averages will only be approximately, not exactly, accurate.

Statistics on vehicle assembly countries, although unnecessary for the analysis of average USCan parts content, provide useful supplemental information. Several data sources were used to estimate for each make-model and model year (1994-98) the percent of vehicles sold in the United States that were assembled in the United States, Canada, Mexico or overseas. The majority of make-models had all their vehicles assembled in just one country in any given year. In make-models where some units were assembled in one North American country and the remainder in one overseas country, the *Automotive News* sales data and/or the Polk registration data usually identify the percentage for each country. However, those two sources do not distinguish between United States, Canadian and Mexican assemblies. VINs, on the other hand, specify the country of assembly. State crash data for calendar year 1997 from eight States that report the VIN and send their files to NHTSA - Florida, Maryland, Missouri, New Mexico, North Carolina, Ohio, Pennsylvania and Utah - show the distribution of assembly locations among crash-involved MY 1994-97 vehicles. These distributions are assumed to be approximately correct for overall U.S. registrations. Distributions for MY 1998 are estimated based on 1997 registrations and 1998 production, as in the following example:

Assembled In	1997 U.S. Regs	1997 Production	1998 Production	1998 U.S. Registrations Unadjusted[3]	Adjusted[4]
United States	82%	59,212	57,989	80.31	81%
Mexico	18%	35,987	37,789	19.00	19%

A data base was generated for all make-models of passenger cars, pickup trucks, SUVs and vans with a gross vehicle weight rating (GVWR) or 8,500 pounds or less, for model years 1994-98, stating the USCan content on the AALA label (MY 1995-98 only), the model year registrations, the base sticker price, and the percent of U.S.-sold vehicles assembled in the United States, Canada, Mexico and overseas. It is listed in Appendix A. As stated above, many of the numbers are approximate rather than exact. But the data set is complete and has no missing data.

2.2 Overall trends in U.S./Canadian parts content and assembly locations

The principal finding of this analysis is that value-weighted average USCan parts content declined from 70.01 percent in new MY 1995 cars and light trucks, the first year of the labels, to 67.64 percent in MY 1998. USCan content was 71.77 percent in 1996 and 68.10 percent in 1997:

All new passenger cars, pickup trucks, SUVs and vans
(8,500 pounds GVWR or less)

Value-Weighted Averages

Model Year	Total Registrations	Avg Base Sticker Price	Approximate Total Value	**Value-Weighted Avg. USCan Parts Content (%)**
1994	14.37 M	$ 18,385	$ 221.3 B	.
1995	15.61	19,328	257.0	**70.01**
1996	13.60	19,706	233.3	**71.77**
1997	15.05	21,055	275.6	**68.10**
1998	14.73	21,741	278.9	**67.64**

[3] 80.31 = (57,989/59,212) x 82; 19.00 = (37,789/35,987) x 18

[4] 81 = 80.31 / (80.31 + 19.00); 19 = 19.00 / (80.31 + 19.00)

	Percent Assembled in				
	U.S./Canada	U.S.	Canada	Mexico	Overseas
1994	82.0	69.7	12.2	1.7	16.3
1995	80.1	66.8	13.2	2.3	17.6
1996	82.3	68.0	14.3	3.5	14.1
1997	80.2	68.1	12.2	3.5	16.2
1998	80.1	67.4	12.7	3.4	16.4

The percentage of new vehicles assembled in the United States or Canada declined from 82 in 1994, just before the labels, to 80 in 1998. The strongest trend during 1994-98, at least in relative terms, was the doubling of Mexican assemblies. Overseas assemblies declined from 16.3 percent in 1994 to 14.1 percent in 1996, but had recovered to 16.4 percent by 1998. United States and Canadian assemblies did not change much from 1994 to 1998.

Overall registrations were stable (some of the year-to-year fluctuation is due to variation in the length of the "production" model year). The average base sticker price increased 4 percent a year, from $18,385 to $21,741. However, the larger than usual (6.8%) increase from 1996 to 1997 is primarily due to the inclusion of destination charges in the base sticker price in *Automotive News Market Data Books* starting in 1997.

The initial impression from these aggregate statistics is that the introduction of the labels in 1995 was not followed by a massive increase in USCan parts content nor a massive shift from overseas to U.S./Canadian assembled vehicles; on the contrary, both had declined by 1998. However, these initial findings need to be confirmed by more detailed analyses of segments of the automotive market and a comparison of trends in motor vehicles and other consumer products.

Trends are essentially the same if the data are registration-weighted rather than value-weighted. The registration-weighted average USCan content and assembly are 1-2 percentage points higher in each year than in the value-weighted data because the high-priced imports are given less weight here. However, the net decline in USCan content from 1995 to 1998 is 2.2 percentage points, similar to the trend in the value-weighted data.

Registration-Weighted (Not Value-Weighted) Averages

Model Year	USCan Parts Content (%)	Percent Assembled in U.S./Canada	Mexico	Overseas
1994	.	84.8	2.2	13.0
1995	71.77	83.1	3.1	13.8
1996	73.26	85.0	4.2	10.8
1997	69.98	83.4	4.0	12.6
1998	69.53	83.2	4.1	12.7

The remaining analyses of this chapter are all based on value-weighted averages for USCan content.

2.3 "Big 3" vs. foreign-based nameplates

One way to segment the automotive market is to compare vehicles bearing the nameplates of the "Big 3" domestic corporations, General Motors, Ford or Chrysler, regardless of who designed or assembled them[5], and vehicles with nameplates of foreign-based corporations[6], regardless of where they were built. The data analyzed in this report all precede the DaimlerChrysler merger. Here are the relative market shares for the Big 3 and foreign-based nameplates in model years 1994-98, including all cars and light trucks, based on the model-year registrations as listed in the data base in Appendix A (not value-weighted):

	Market Shares (%)				
	1994	1995	1996	1997	1998
Big 3	73.3	72.5	73.5	71.4	70.0
Foreign-based nameplates	26.7	23.5	26.5	28.6	30.0

Clearly, the introduction of the labels in 1995 was not followed by an immediate or subsequent shift from foreign-based nameplates to the Big 3. Now let's look at the trends in USCan content and assembly location separately for Big 3 and foreign-based nameplate vehicles:

Big 3

Model Year	Total Registrations	Avg Base Sticker Price	Approximate Total Value	**Value-Weighted Avg. USCan Parts Content (%)**
1994	10.54 M	$ 17,319	$ 160.1 B	•
1995	11.32	18,009	182.0	**89.19**
1996	10.00	18,785	168.7	**87.64**
1997	10.75	20,003	194.5	**85.28**
1998	10.31	20,782	193.7	**83.98**

Percent Assembled in

[5]The "Big 3 nameplates" include any car or light truck sold as a Chrysler, Dodge, Plymouth, Eagle, Jeep; Ford, Lincoln, Mercury; Buick, Cadillac, Chevrolet, Geo, Oldsmobile, Pontiac, Saturn or GMC, regardless of whether it was assembled in North America ("domestic") or overseas ("captive import").

[6]"Foreign-based nameplates" in this report include any car or light truck sold as a VW, Audi; BMW; Nissan, Infiniti; Honda, Acura; Jaguar; Mazda; Mercedes-Benz; Porsche; Saab; Subaru; Toyota, Lexus; Volvo; Mitsubishi; Suzuki; Hyundai; Kia; Isuzu; or Land Rover, regardless of whether it was assembled in North America ("transplant") or overseas ("import").

	U.S./Canada	U.S.	Canada	Mexico	Overseas
1994	97.6	81.8	15.8	1.9	.5
1995	97.1	79.5	17.6	2.5	.4
1996	96.1	77.5	18.6	3.7	.2
1997	95.6	79.5	16.1	3.8	.6
1998	96.1	79.1	17.0	3.5	.4

Foreign-based Nameplates

Model Year	Total Registrations	Avg Base Sticker Price	Approximate Total Value	**Value-Weighted Avg. USCan Parts Content (%)**
1994	3.84 M	$ 21,175	$ 61.2 B	•
1995	4.29	22,532	74.9	**23.42**
1996	3.60	22,150	63.6	**29.64**
1997	4.31	23,577	81.1	**26.90**
1998	4.42	23,922	85.1	**30.45**

	Percent Assembled in				
	U.S./Canada	U.S.	Canada	Mexico	Overseas
1994	40.9	38.1	2.9	1.3	57.7
1995	38.7	36.1	2.6	1.9	59.4
1996	45.8	42.8	3.0	3.0	51.2
1997	43.3	40.7	2.6	2.9	53.8
1998	43.9	40.9	3.0	3.2	52.9

These statistics reveal the pattern that will appear repeatedly. Big 3 vehicles, starting from a high USCan parts content in 1995 (89.19%), steadily lost USCan content in subsequent years and had dropped to 83.98 percent by 1998. Vehicles sold by foreign-based companies substantially gained USCan content, from 23.42 percent in 1995 to 30.45 percent in 1998, but even then they were still far below the USCan parts content of the Big 3.

Shifts in assembly locations parallel the USCan parts content trends. Big 3 cars and trucks dropped from 97.6 percent U.S. or Canadian assembly in 1994 to 96.1 percent in 1998, while Mexican assemblies increased from 1.9 to 3.5 percent (well under 1% of Big 3 sales are "captive imports" assembled overseas). Foreign-based nameplate vehicles increased from 40.9 percent to 43.9 percent assembly in the United States or Canada, and from 1.3 percent to 3.2 percent in Mexico. Their overseas assemblies fell from 57.8 to 52.9 percent. Basically, Big 3 cars became less U.S./Canadian and more Mexican, while import-brand cars became substantially more U.S./Canadian and/or more Mexican, but less Japanese and German.

2.4 "Domestics" vs. "transplants" vs. "imports"

A more complex market segmentation takes into account where the vehicle was designed and assembled as well as who sold it. Three large groups are "true domestics," designed by the Big 3 in North America, assembled by Big 3 plants in North America and sold by the Big 3; "true transplants," designed overseas, assembled in North America in plants owned in whole or in part by foreign-based corporations, and sold with foreign-based nameplates; and "true imports," designed and assembled overseas and sold with foreign-based nameplates. Some make-models, however, do not fit into these categories but into one of six smaller groups. These groups and their USCan content trends will be discussed one-by-one, but first let us look at their relative market shares in MY 1994-98:

	Market Shares (%)				
	1994	1995	1996	1997	1998
Big 3 nameplates					
"True domestic"	68.0	66.9	69.6	66.4	65.9
Internat'l design, Big 3 factory	2.3	2.7	1.4	3.0	2.9
Internat'l design, transplant factory	2.5	2.4	2.4	1.6	1.1
"Captive import"	.5	.5	.2	.4	.2
Foreign-based nameplates					
Big 3 design & factory	1.1	.6	.8	.6	.6
"True transplant"	15.2	14.5	15.0	15.7	16.9
Part-time transplant	.4	.6	.3	.3	.4
Mexican transplant	.4	.6	.8	.8	.9
"True import"	9.6	11.1	9.7	11.2	11.3

Market shares did not change dramatically for the three large categories. True domestics more or less held their own, first gaining from 68.0 to 69.6 but eventually falling back to 65.9 percent of all motor vehicle registrations. True transplants gained some market share, from 15.2 percent to 16.9 percent. True imports gained from 9.6 percent to 11.3 percent in 1998 - a boom year for luxury vehicles.

<u>"True domestics"</u> include the many make-models that most people consider pure Big 3. They have to be designed by the Big 3 in North America; in this age of multinational corporations and the "international car" it is hard to say who designed what, but at least they are not obvious copies of vehicles initially designed overseas. They can be assembled in the United States, Canada or Mexico, but at plants owned by the Big 3. They carry Big 3 nameplates. Most Big 3 vehicles - Dodge Caravan, Mercury Grand Marquis and Buick LeSabre to name just a few - are true domestics. These models can be expected to have the highest USCan content, and indeed they do:

True Domestics

Model Year	Total Registrations	Avg Base Sticker Price	% USCan Content Avg	% USCan Content Min	% USCan Content Max	% Assembled in US/Can	% Assembled in Mexico
1994	9.78 M	$ 17,659	•			98.7	1.3
1995	10.44	18,383	**90.64**	70	96	98.4	1.6
1996	9.46	19,018	**88.78**	70	96	97.1	2.9
1997	10.00	20,289	**86.70**	60	96	96.9	3.1
1998	9.70	21,024	**85.17**	60	95	97.2	2.8

USCan parts content started at 90.64 percent in 1995, and although it had fallen substantially to 85.17 percent by 1998, that is still a lot higher than the average for any of the other eight groups. Although the labels usually shed no light on where the decrease is going, it is safe to speculate that much of it went to Mexico during those years of the North American Free Trade Act (NAFTA) and, before that, the *maquiladora*[7] movement (see Section 1.2). Still, among all the individual make-models here, USCan content was never lower than 60 percent, and it ranged as high as 96 percent. Most of the models were closer to the high end, as evidenced by the average. (Mercury Villager, the only make-model as low as 60 percent, was designed by Ford in cooperation with Nissan, contains many Japanese components, and is almost on the borderline between "true" domestics and the next category.) Mexican assembly of these vehicles likewise increased from 1.3 to 2.8 percent; specifically, the Dodge Ram Pickup, GM Suburban and Dodge/Plymouth Neon were assembled in Mexico in large numbers, other make-models in smaller numbers.

"International" design cars built in Big 3 factories and sold with Big 3 nameplates include the high-volume Ford Escort/Mercury Tracer and the Chrysler Sebring Convertible. Escort and Tracer were originally based on the Mazda Protege design, but the cars sold in the United States during 1994-98 were all built at Ford plants in the United States or Mexico and are, in many ways, more Fords than Mazdas. The Sebring Convertible is fundamentally a Mitsubishi sold by Chrysler; however it is assembled at a Chrysler plant in Mexico, not a Mitsubishi plant. These make-models can be expected to have less USCan content than "true" domestics, due to a combination of Japanese and Mexican influences (results for MY 1996 are anomalous because Ford Escort had a short production run in that model year):

[7]A *maquiladora* is a factory that assembles a product in Mexico from mostly U.S. components and exports most of the assembled product back to the United States. By agreement between the two countries, the movement of components and assembled products is duty-free.

International Design; Big 3 Assembly; Big 3 Nameplate

Model Year	Total Registrations	Avg Base Sticker Price	% USCan Content Avg	Min	Max	% Assembled in U.S.	Mexico
1994	.33 M	$ 9,323	.			65.9	34.1
1995	.43	9,971	**79.15**	75	80	59.7	40.3
1996	.19	13,893	**70.49**	50	85	28.9	71.1
1997	.44	13,350	**72.80**	45	80	71.5	28.5
1998	.42	13,662	**64.92**	40	80	71.0	29.0

USCan parts content has ranged from 70 to 85 percent in Escort and Tracer, but only from 40 to 50 percent in Sebring Convertible. The average was 79.15 percent in 1995, before the Sebring Convertible existed, but it has fallen to 64.92 percent. Additional information on the labels indicate both Japanese and Mexican content: Japanese engines and/or transmissions on some Escorts and Tracers, Japanese and Mexican engines on Sebring Convertible, and Mexican and/or Japanese content in excess of 15 percent in some model years.

"Transplant" vehicles sold with Big 3 nameplates form a cohesive group that includes the Geo Prizm, designed by Toyota and built by New United Motor Manufactures, Inc. (NUMMI) the GM-Toyota joint-venture plant located in Fremont, California; Geo Metro and Tracker, designed by Suzuki and built by CAMI, a joint venture between General Motors of Canada and Suzuki Motor Corp. located in Ingersoll, Ontario; Ford Probe, designed by Mazda and built by Auto-Alliance International, a Ford-Mazda joint venture plant in Flat Rock, Michigan; and Chrysler Sebring sedan, Dodge Avenger and Eagle Talon, designed by Mitsubishi and built at the Normal, Illinois Chrysler-Mitsubishi joint-venture plant. These make-models can be expected to have less USCan content than the preceding group:

International Design; Transplant Assembly; Big 3 Nameplate

Model Year	Total Registrations	Avg Base Sticker Price	% USCan Content Avg	Min	Max	% Assembled in US/Can	Mexico
1994	.36 M	$ 11,277	.			100.	.
1995	.38	12,412	**56.45**	40	72	100.	.
1996	.32	12,805	**56.96**	40	72	100.	.
1997	.24	13,668	**54.29**	40	65	100.	.
1998	.16	14,294	**61.21**	40	73	100.	.

Although lower than the preceding groups, these vehicles still have a lot of USCan parts content. They are the first indication in this report that transplants, unlike true imports, have a lot of USCan parts. The U.S./Canadian value added to transplants goes far beyond mere assembly labor.

"Captive imports" -i.e., cars designed and built overseas but sold in the United States by the Big 3 include Cadillac Catera, Ford Aspire, Mercury Capri, Dodge/Plymouth Colt, Dodge Stealth, and Eagle Summit:

Captive Imports: International Design; Overseas Assembly; Big 3 Nameplate

Model Year	Total Registrations	Avg Base Sticker Price	% USCan Content Avg	Min	Max
1994	.07 M	$ 11,932	.		
1995	.08	10,701	**5.00**	5	5
1996	.03	9,307	**5.00**	5	5
1997	.06	24,143	**3.62**	3	5
1998	.03	30,635	**4.00**	4	4

Unlike all other vehicles with Big 3 nameplates, captive imports have very little USCan content. Sales have dwindled in recent years. The large price increase in 1997 reflects the introduction of Cadillac Catera.

Big 3 designed and built trucks sold with foreign-based nameplates are the reverse of the preceding group. They include the Mazda Navajo and Pickup (which are essentially a Ford Explorer and Ranger, respectively), the Nissan Quest (Mercury Villager) and the Isuzu Hombre (GM "S/T" pickup). Since they are Big 3 vehicles produced in Big 3 plants (not joint venture or transplant factories), they can be expected to have high USCan content. However, they only account for a small proportion of foreign-based nameplate sales:

Big 3 Design; Big 3 Assembly; Foreign-Based Nameplate

Model Year	Total Registrations	Avg Base Sticker Price	% USCan Content Avg	Min	Max
1994	.16 M	$ 14,528	.		
1995	.09	18,091	**71.83**	70	80
1996	.10	16,844	**76.33**	70	92
1997	.09	18,610	**65.74**	60	90
1998	.09	17,062	**72.64**	60	90

"True transplants" are the highest-volume subgroup of foreign-based nameplate vehicles and, intuitively, the group that might have the greatest diversity of USCan content. They are designed overseas, or at least at companies that are not the Big 3. They are primarily assembled in the United States, Canada or Mexico at plants owned by foreign-based companies or jointly owned with the Big 3. However, in some years, the company may import some units if, for instance, demand exceeds North American production. But if imports account for over 35 percent of registrations in any year, we will classify this make-model as a "part-time" rather than a "true" transplant. At least part (usually all) of the North American assemblies are in the United States or Canada; if all are in Mexico, we will classify the make-model as a "Mexican" rather than a "true" transplant. They carry foreign-based nameplates. These models could have quite low USCan content if they are little more than locally assembled kits of imported parts, but they could have high USCan content if the manufacturer has brought over or locally developed in-house and supplier parts operations:

True Transplants

Model Year	Total Registrations	Avg Base Sticker Price	**% USCan Content** Avg	Min	Max	% Assembled in No. Amer.	Overseas
1994	2.18 M	$ 13,187	.			81.8	18.2
1995	2.27	14,171	**47.04**	25	72	87.7	12.3
1996	2.03	15,042	**54.35**	30	71	94.2	5.8
1997	2.36	15,808	**52.52**	40	65	95.1	4.9
1998	2.49	16,736	**59.26**	40	75	93.1	6.9

Sales of true transplants increased, partly due to best-sellers such as Honda Accord and Toyota Camry, and partly because new make-models such as Mercedes ML320, BMW Z3 and Toyota Sienna joined the ranks.

USCan content increased quite substantially, from 47.04 percent in 1995 to 59.26 percent in 1998. At 75 percent, the USCan content of the 1998 Honda Accord was not much below the average for true domestic vehicles (85.17%), and three times as high as the lowest make-model in this group, the 1995 Toyota pickup (25%). However, most of the models are at an intermediate level, well below the USCan content of Big 3 cars, yet containing U.S./Canadian value added far beyond mere assembly labor. Many of the transplants have become more North American over time, both in parts content and in the proportion assembled in the Western Hemisphere.

This increase of USCan parts in transplant vehicles since the inception of AALA is one of the most important evaluation findings. Of course, it is inappropriate to conclude from these statistics alone, in the absence of other evidence, that the AALA labels themselves "caused" the trend of increasing USCan content in transplants. Many other factors, especially the U.S.-Japan Agreement on Auto and Auto Parts, have been contributing to this trend (see Sections 1.2 and 1.3).

<u>"Part-time transplants"</u> are a small group of make-models that moved back and forth between North American and overseas assembly, or that were produced half-and-half in both places, including Suzuki Sidekick and Swift, Hyundai Sonata, VW Cabrio and Isuzu Amigo. Since their production is not centered in North America, they have much lower USCan content, on the average, than "true" transplants:

Part-Time Transplants

Model Year	Total Registrations	Average Base Sticker Price	% USCan Content Avg	Min	Max	% Assembled in North America	Overseas
1994	.06 M	$ 11,041	.			36.7	63.3
1995	.09	13,257	**14.96**	5	45	20.3	79.7
1996	.03	14,569	**14.78**	5	50	33.7	66.3
1997	.05	15,175	**8.28**	2	50	37.9	62.1
1998	.06	15,508	**15.83**	1	55	53.8	46.2

"Mexican transplants" include Volkswagen's Jetta, Golf and New Beetle. Sales more than doubled in 1994-98. They resemble true transplants, except they are assembled exclusively in Mexico, not in the United States or Canada:

Mexican Transplants (VW Jetta, Golf and New Beetle)

Model Year	Total Registrations	Avg Base Sticker Price	% USCan Content Avg	Min	Max
1994	.06 M	$ 13,480	.		
1995	.10	13,282	**10.00**	10	10
1996	.11	14,031	**15.00**	15	15
1997	.11	14,865	**9.07**	5	10
1998	.14	15,144	**10.35**	2	15

These models have far less USCan content than "true transplants." Additional information on the labels suggests they contain large, fairly similar proportions of Mexican and German parts. The labels also show a mix of Mexican and German engines. In other words, VW models assembled exclusively in Mexico tend to contain Mexican parts, whereas true transplants assembled in the United States or Canada contain U.S./Canadian parts. By contrast, Big 3 cars, even when they are assembled in Mexico, still contain large percentages of U.S./Canadian parts.

"True imports" are designed overseas, assembled overseas (except a small proportion of Volvos in Canada and 1995-96 BMW 300's in the United States) and carry foreign-based nameplates. Since they include many luxury make-models, the average price is substantially higher than the other groups. Sales grew in 1997-98 as the booming United States economy whetted appetites for luxury cars and trucks:

True Imports

Model Year	Total Registrations	Avg Base Sticker Price	% USCan Content Avg	Min	Max	% Assembled in US/Can	Overseas
1994	1.38 M	$ 29,417	.			.5	99.5
1995	1.73	29,683	**4.12**	0	20	.8	99.2
1996	1.32	29,694	**4.74**	0	20	.9	99.1
1997	1.69	30,919	**4.54**	0	15	.3	99.7
1998	1.66	31,320	**3.91**	0	15	.6	99.4

USCan content is much lower than in transplants, averaging below 5 percent and rarely exceeding 10 percent in any individual make-model. Whereas foreign companies extensively manufacture or purchase parts in the United States or Canada to put into the vehicles they assemble here, they do not ship many USCan parts home, assemble them into vehicles and then ship the finished product back to the United States.

By 1998, the USCan content of true transplants (59.26%) was substantially closer to true domestics (85.17%) than to true imports (3.91%). In other words, the new-vehicle market contains three important, quite distinct groups: domestics, which always had high USCan content, but lost USCan content during 1995-98; imports, that have very low USCan content throughout 1995-98; and transplants, whose USCan content was midway between imports and domestics in 1995, but content gained substantially during 1995-98 and is now closer to domestics than imports.

2.5 Cars vs. pickup trucks vs. SUVs vs. vans

There may be a perception that light trucks have higher USCan content than passenger cars, if only because the Big 3 have a higher market share of light trucks than cars, and perhaps even because consumers of light trucks place more value on "buying American" than car buyers. That perception could lead to a belief that the market shift from cars to light trucks in recent years ought to have increased average USCan content for the overall fleet.

The perception, however, is primarily true of pickup trucks and vans, not SUVs. Because the market shift away from passenger cars is mainly to SUVs, not pickup trucks or vans, the effect of this shift on net USCan content is small.

The growing popularity of SUVs is immediately seen in statistics on market shares. SUVs increased from 11 to 18 percent of the new-vehicle market in just four years, while passenger cars dropped from 58 to 53 percent. Pickup trucks captured close to 19 percent of sales each year, and vans (with GVWR 8,500 pounds or less) 11 percent. Essentially, SUVs took the place of passenger cars:

	Market Shares (%)				
	1994	1995	1996	1997	1998
Passenger cars	58.3	59.7	57.9	55.3	53.4
Pickup trucks	20.2	17.0	17.1	19.9	17.9
SUVs	10.8	11.6	13.9	15.5	17.7
Vans	10.7	11.8	11.2	9.4	11.0

Passenger cars sold in the United States, by 1998, were about 58 percent Big 3 and 42 percent import brands, the latter more or less equally divided between transplants and true imports. That mix resulted in lower USCan content than pickup trucks, SUVs or vans:

Passenger Cars

Model Year	Total Registrations	Avg Base Sticker Price	**Avg % USCan Content**	% Assembled in US/Can	Mexico	Overseas
1994	8.37 M	$ 20,327	.	75.5	2.6	21.9
1995	9.32	20,922	**64.14**	74.0	3.1	22.9
1996	7.87	20,958	**66.29**	77.5	3.6	18.9
1997	8.33	22,287	**61.76**	75.8	3.1	21.1
1998	7.86	22,753	**60.38**	73.9	3.6	22.5

USCan parts content decreased from 64.14 percent in MY 1995 to 60.38 percent in 1998. During those years U.S./Canadian assembly also declined, but not nearly as much: from 75.5 to 73.9 percent. The decline in USCan content reflects primarily a reduction of USCan content in Big 3 cars, and secondarily a shift from Big 3 cars to transplants and imports; it would have been even greater if not for increased USCan content among transplants. Sales of passenger cars decreased slightly.

Pickup trucks sold in the United States during 1994-98 were assembled 97-99 percent in North America; each year 82-90 percent were Big 3 products. In other words, only 1-3 percent are true imports. An important reason is that pickup trucks brought fully assembled into the United States, except from Canada or, more recently, Mexico have long been charged a 25 percent tariff[8] (see Section 1.2). That's given North America a historical advantage as place of assembly. It is reflected in the high market share for the Big 3 and the high proportion of transplants among trucks sold by foreign-based companies:

[8]"Mission Impossible? AIADA Tackles 25% Truck Tariff," *AIADA's Showroom*, Vol. 16, No. 5, June/July 1999. In the 1994-98 time frame, the 25 percent tariff applies only to pickup trucks imported from countries other than Canada or Mexico. Vans and SUVs are exempt.

Pickup trucks

Model Year	Total Registrations	Avg Base Sticker Price	**Avg % USCan Content**	% Assembled in US/Can	Mexico	Overseas
1994	2.91 M	$ 11,302	.	95.6	1.0	3.5
1995	2.65	12,397	**83.33**	95.1	1.9	3.1
1996	2.32	13,015	**83.36**	92.4	5.8	1.8
1997	2.99	14,286	**83.55**	92.1	6.8	1.1
1998	2.63	14,433	**83.09**	92.3	7.3	.4

USCan content held its own as the Big 3 market share increased and overseas-assembled trucks almost disappeared - and despite increasing production of Big 3 pickup trucks in Mexico. Import-brand pickup trucks, both transplants and true imports, have lost sales since 1995. The latest USCan content, 83.09 percent, is substantially higher than for passenger cars (60.38%).

SUVs are the growth market of the 1990's. Registrations increased by 67 percent from 1994 to 1998. They include a growing proportion of luxury models and since 1996 they have had a higher average base sticker price than cars, pickups or vans. Sales have grown for models produced throughout 1994-98 such as GMC Yukon, or for new models such as Ford Expedition that more or less replaced existing models in a manufacturer's lineup, or for new models by manufacturers that had just entered the SUV business, such as Mercedes ML320:

SUVs

Model Year	Total Registrations	Avg Base Sticker Price	**Avg % USCan Content**	% Assembled in US/Can	Mexico	Overseas
1994	1.56 M	$ 18,749	.	84.6	.	15.4
1995	1.80	20,116	**69.76**	79.6	1.5	18.9
1996	1.88	21,292	**72.76**	81.6	4.0	14.4
1997	2.33	23,480	**67.30**	75.3	4.1	20.6
1998	2.61	24,683	**69.06**	78.5	2.4	19.1

The USCan content and assembly trends of SUVs are much closer to those of passenger cars than those of pickup trucks or vans. Those who perceive the SUV as a "Big 3 stronghold" are not taking into account such highly successful imports as the Nissan Pathfinder, Toyota 4Runner and RAV4 and Honda CRV or transplants such as Isuzu Rodeo and Honda Passport. USCan content is not much higher than for cars and well below the levels for pickup trucks and vans. But it held its own during 1995-98. Like cars, close to 20 percent are assembled overseas (SUVs are not subject to the 25% tariff that applies to pickup trucks). Several Big 3 brands are now extensively assembled in Mexico, further reducing USCan content and assembly. When the public substituted SUVs for cars, they barely changed their domestic vs. transplant vs. import consumption patterns.

Vans have a level of USCan content and assembly comparable to pickup trucks. Even though vans for passenger transport are not subject to the 25 percent tariff that applies to pickup trucks, the Big 3 have kept a very high share thanks to a technological and marketing edge and economies of scale. The vans in the data base include minivans (e.g., Plymouth Voyager, Ford Windstar, Chevrolet Venture, Mazda MPV or Toyota Sienna) and full-sized vans with GVWR of 8,500 pounds or less (e.g., Dodge Ram Wagon and Van, Ford Econoline or GMC Savana):

Vans

Model Year	Total Registrations	Avg Base Sticker Price	**Avg % USCan Content**	% Assembled in US/Can	Mexico	Overseas
1994	1.53 M	$ 16,575	.	96.6	.	3.4
1995	1.84	17,614	**85.70**	95.2	.	4.8
1996	1.52	18,555	**84.79**	96.4	.	3.6
1997	1.41	19,994	**81.09**	95.6	.	4.4
1998	1.60	20,048	**80.42**	97.7	.	2.3

Registrations were close to 1.6 million throughout 1994-98. USCan content started at 85.70 percent in 1995, even higher than pickup trucks, but it had declined to 80.42 percent by 1998. Whereas the absolute numbers are comparable to those of pickups, the declining trend is similar to cars. Average USCan content declined primarily because Big 3 vans had fewer USCan parts, not because of a shift to transplants or imports. For example, USCan content in the Chevrolet Venture/Olds Silhouette/Pontiac Trans Sport dropped from 95 percent in 1997 to 75 percent in 1998, while Mexican content increased to 17 percent.

2.6 Effect of within-group USCan content shifts vs. between-group market shifts

The overall USCan content of the new-vehicle fleet declined from 70.01 percent in MY 1995 to 67.64 percent in MY 1998, as shown in Section 2.2. The next sections enumerated four factors that appear to be driving overall USCan content:

- A trend toward less USCan content within true domestic vehicles drives fleetwide USCan content down.
- A trend toward more USCan content within true transplant vehicles drives fleetwide USCan content up.
- A market shift from Big 3 to import-nameplate vehicles drives fleetwide USCan content down.
- A market shift from passenger cars to SUVs drives fleetwide USCan content up.

Here are rough estimates of the relative importance of each factor:

- True domestic Big 3 vehicles constitute close to 66 percent of the vehicle fleet. USCan content decreased by about 5.4 percentage points: from 90.6 percent in 1995 to 85.2

percent 1998. As a result, this factor accounts for a 66% x 5.4% = 3.6 percentage point reduction in USCan content for the overall vehicle fleet. When domestic Big 3 vehicles with international design (e.g., Ford Escort) are included, this factor rises to a 3.9 percentage point overall **reduction**.

- True transplant vehicles constitute about 17 percent of sales. USCan content increased by about 12 percentage points: from 47 percent 1995 to 59 percent in 1998. This factor accounts for a 17% x 12% = 2.0 percentage point **increase** in USCan content for the whole vehicle fleet.

- The market share for the Big 3 dropped from 72.5 percent in MY 1995 to 70.0 percent in MY 1998, while import-nameplate vehicles rose from 27.5 to 30.0 percent of sales. In 1998, USCan content was, on the average, 53.5 percentage points higher in Big 3 than in import-nameplate vehicles: 84 vs. 30.5 percent. This factor accounts for a 2.5% x 53.5% = 1.3 percentage point **reduction** in USCan content for the whole fleet.

- The market share for passenger cars dropped from 59.7 percent in 1995 to 53.4 percent in 1998, with nearly all the growth going to SUVs. In 1998, USCan content was, on the average, 9 percentage points higher in SUVs than in passenger cars: 69 vs. 60 percent. This factor accounts for a 6.3% x 9% = 0.6 percentage point **increase** in USCan content for the entire fleet.

In all, the four factors approximately account for a net:

$$-3.9 + 2.0 - 1.3 + 0.6 = -2.6$$

and that corresponds closely to the actual net 2.37 percentage point reduction in USCan content, from 70.01 to 67.64 percent, in the overall fleet from 1995 to 1998. In other words, the most important factor has been the reduction of USCan content in Big 3 vehicles, and it has overshadowed the substantial gains in USCan content among the transplant vehicles as well as any effects of market shifts.

2.7 By manufacturer

The trends in USCan content differ substantially among manufacturers, as we shall see. There is, however, no obvious correlation between aggregate USCan content trends and manufacturers' success in gaining or maintaining market share. Let us first examine the market shares of 21 manufacturers, based on the "production model year registrations" as defined in Section 2.2, and thus somewhat different (and more variable) than shares based on "calendar year sales" as reported in *Automotive News Almanacs*. All statistics in this section are based on the nameplate under which a vehicle is sold, not on who produced it. For example, NUMMI cars sold as Geo Prizms are included in General Motors, and those sold as Corollas are included in Toyota:

	Market Shares (%)				
	1994	1995	1996	1997	1998
General Motors	33.6	33.4	32.1	29.6	29.3
Ford	25.1	24.7	23.7	26.4	24.8
Chrysler	14.6	14.5	17.8	15.4	15.9
Toyota	7.6	6.8	7.8	7.8	8.7
Honda	5.5	5.2	5.6	6.4	6.9
Nissan	5.0	5.5	4.9	5.3	4.2
Mazda	2.7	2.1	1.7	1.4	1.5
Mitsubishi	1.4	1.8	1.1	1.7	1.2
Subaru	.3	.7	.7	.8	1.0
Isuzu	.8	.8	.6	.5	.8
Suzuki	.2	.2	.2	.2	.2
Volkswagen	.5	.9	1.1	1.1	1.5
Mercedes-Benz	.4	.6	.4	.7	1.0
BMW	.6	.8	.4	.9	.8
Volvo	.6	.6	.6	.4	.7
Jaguar	.11	.12	.12	.13	.16
Landrover	.05	.13	.18	.16	.13
Saab	.14	.20	.17	.19	.09
Porsche	.02	.05	.05	.08	.07
Hyundai	.8	.9	.6	.7	.6
Kia	.1	.2	.3	.4	.5

Companies with substantial gains (in absolute terms) are Chrysler, Toyota, Honda, Volkswagen, Mercedes-Benz and Kia. General Motors, Nissan and Mazda lost market share. Ford was almost unchanged. Now let us examine the trends in value-weighted average USCan parts content:

	USCan Content (Average %)			
	1995	1996	1997	1998
General Motors	91.9	91.7	90.3	85.0
Ford	85.8	84.9	82.6	85.8
Chrysler	88.6	84.0	80.1	79.0
Toyota	30.5	36.2	34.2	37.4
Honda	36.0	47.9	42.7	53.0
Nissan	22.9	23.0	25.8	26.1
Mazda	29.4	37.8	33.7	38.7
Mitsubishi	30.0	41.3	27.8	30.6
Subaru	26.2	33.9	32.4	23.6
Isuzu	25.0	33.1	38.4	47.8
Suzuki	24.7	16.5	13.5	10.1
Volkswagen	7.8	10.3	7.1	7.3
Mercedes-Benz	2.0	2.0	< .5	13.4
BMW	4.2	11.8	9.1	9.2
Volvo	2.0	2.0	2.0	1.7
Jaguar	6.1	5.7	5.1	5.0
Landrover	< .5	< .5	< .5	< .5
Saab	1.3	1.0	1.8	1.9
Porsche	< .5	< .5	< .5	< .5
Hyundai	7.6	5.0	1.3	1.1
Kia	7.2	5.0	5.0	4.2

There are clear differences between the Big 3, who have high levels of USCan content (79-92%) in their almost exclusively domestic vehicles; the Japanese companies, all except 1997-98 Suzuki at an intermediate level (22-53%), selling a large proportion of transplants with some imports; and the European and Korean companies, at a much lower level (0-13%), selling primarily imports.

At the same time, there are visible differences within each group. Among the Big 3, Ford started the lowest, but held its USCan content and, by 1998 was the highest (85.8%). GM started at a very high 91.9 percent but dropped substantially to 85 percent in 1998. Most of the drop came in the last year, which saw an almost across-the-board reduction of USCan content in the various GM models. Chrysler's USCan content dropped even more than GM's, from 88.6 to 79 percent.

All Japanese companies except Subaru and Suzuki increased their USCan content during 1995-98, but Honda and Isuzu had the largest increases by far. Honda, at 53 percent, is now well ahead of the others. Toyota and Mazda had increases of 7-9 percentage points, placing them in the high 30's. Nissan, Mitsubishi and Subaru changed less and had 23-31 percent USCan content in 1998.

European companies had much lower USCan content than Japanese vehicles. Volkswagen, with many operations in Mexico, maintained a fairly steady USCan content around 8 percent. After BMW and Mercedes opened assembly facilities in Spartanburg, South Carolina and Tuscaloosa, Alabama, respectively, USCan content jumped to 9-13 percent. The other European vehicles have little USCan content. Hyundai lost most of its USCan content after closing its Canadian assembly plant.

When data are aggregated at the company level, there is little correlation between the trends in USCan content and market share. Among the Big 3, GM lost USCan content and lost market share; however, Chrysler lost even more USCan content but gained market share. Among Japanese companies, Honda and Toyota gained USCan content and market share; however, Nissan and Mitsubishi also gained USCan content but lost market share; Subaru lost USCan content but gained market share. Most of the European companies gained market share but only Mercedes-Benz and BMW increased USCan content. Hyundai lost both market share and USCan content.

The data also suggest that companies sourced more parts during 1995-98 from countries with lower manufacturing costs. Thus, Japanese and German companies sourced more parts in the United States and Canada (or, in the case of VW, in Mexico), American companies acquired more Mexican parts, and Korean companies obtained more from Korea.

Comparison of the assembly locations of vehicles sold in the United States in 1994 and 1998 shows differences among manufacturers as well as time trends:

		Percent of U.S. Registrations Assembled in		
	MY	U.S/Canada	Mexico	Overseas
General Motors	1994	99.4	.6	.
	1998	96.7	2.1	1.0
Ford	1994	97.4	1.9	.7
	1998	98.6	1.4	.
Chrysler	1994	94.0	4.8	1.2
	1998	90.3	9.7	.
Toyota	1994	40.2	.	59.8
	1998	54.0	.	46.0
Honda	1994	60.5	.	39.5
	1998	70.5	.	29.5
Nissan	1994	54.3	.	45.7
	1998	41.0	4.8	54.2

	MY	Percent of U.S. Registrations Assembled in U.S/Canada	Mexico	Overseas
Mazda	1994	52.7	.	47.3
	1998	53.7	.	46.3
Mitsubishi	1994	40.9	.	59.1
	1998	45.7	.	54.3
Subaru	1994	62.0	.	38.0
	1998	57.9	.	42.1
Isuzu	1994	49.5	.	50.5
	1998	75.5	.	24.5
Suzuki	1994	48.7	.	51.3
	1998	22.5	.	77.5
Volkswagen	1994	.	65.9	34.1
	1998	.	53.0	47.0
Mercedes-Benz	1994	.	.	100.0
	1998	22.3	.	77.7
BMW	1994	.	.	100.0
	1998	11.9	.	88.1
Volvo	1994	7.2	.	92.8
	1998	9.3	.	90.7
Saab, Jaguar, Landrover, Porsche	1994	.	.	100.0
	1998	.	.	100.0
Hyundai	1994	2.8	.	97.2
	1998	.	.	100.0
Kia	1994	.	.	100.0
	1998	.	.	100.0

General Motors and Chrysler substantially increased assemblies of vehicles in Mexico and exports of those vehicles to the United States during 1994-98. Ford assembled about the same number of vehicles in Mexico each year, but exported fewer of them to the United States (while selling more in Mexico or other countries). The trends in assembly locations for GM and Chrysler vs. Ford are consistent with the trends in USCan parts content.

Japanese companies rely heavily on transplants. Among the larger companies, Honda had the highest percentage of transplants throughout 1994-98. Their proportion of U.S. sales assembled in the United States or Canada increased from 60.5 percent in 1994 to 70.5 percent in 1998. Toyota had a large increase, from 40.2 percent to 54.0 percent of U.S. registrations assembled in U.S./Canada. Isuzu also had a large increase. Nissan, Subaru and Suzuki reduced assemblies in U.S./Canada. Nissan is also the only Japanese company that assembled vehicles in Mexico for sale in the United States.

Volkswagen, as stated above, assembles many cars in Mexico. Mercedes-Benz and BMW increased their transplant production from nothing to 12-22 percent, still far below most Japanese companies. Hyundai moved all assembly back to Korea.

<u>USCan parts in transplant vehicles</u>: It is especially interesting to focus on the percent of USCan content in the transplant vehicles of the seven companies, all Japanese, that sold transplants throughout 1995-1999. In the following table, "transplants" include "true transplants" and "Big 3 built vehicles sold with foreign-based nameplates" (such as Isuzu Hombre), in the nomenclature of Section 2.4:

	Transplant Vehicles: USCan Content (Average %)			
	1995	1996	1997	1998
Toyota	49.4	53.1	52.7	54.7
Honda	47.1	65.4	59.6	72.0
Nissan	44.0	45.4	46.2	51.1
Mazda	66.2	69.5	67.0	68.8
Mitsubishi	57.6	57.6	51.4	63.4
Subaru	35.0	40.0	40.0	40.0
Isuzu	35.0	48.1	46.4	60.6

Every Japanese manufacturer's transplants gained USCan parts content. Honda and Isuzu gained over 24 percentage points. Toyota, Nissan, Mitsubishi and Subaru gained 5-7 points. In other words, during 1995-98, the Japanese manufacturers succeeded in a concerted effort to increase the proportion of U.S. sales assembled in North America **and** the proportion of USCan parts in these North American-assembled vehicles. Although these trends must have existed even before the AALA and the 1995 U.S.-Japan Agreement on Autos and Auto Parts (see Sections 1.2 and 1.3), they have certainly continued since AALA and the Agreement.

2.8 Make-models that gained or lost USCan content

By tracking the USCan content of individual make-models from 1995 to 1998, we can obtain insight on what sorts of vehicles were the principal gainers, and losers in USCan content. Some models, however, were not produced continuously from 1995 through 1998. To facilitate this analysis, the 298 make-models of cars, pickup trucks, SUVs and vans in the original data base were aggregated into 135 groups of vehicles produced from 1995 through 1998. For example, if a manufacturer produced a model in 1995 and then discontinued it but essentially replaced it with a new model in the same market class - e.g., Ford Bronco and Expedition, both full-sized SUVs - these two models, together, form a group produced from 1995 through 1998. Also, when one company sells two or more models of identical or similar design under different nameplates (corporate twins), with identical or similar USCan content, they are grouped together for this analysis - e.g., Buick LeSabre, Olds 88 and Pontiac Bonneville.

The procedure is to compare the USCan content for MY 1995 and MY 1998 and compute the gain or loss; the average annual registrations for 1995 through 1998; and the **gain score**, the product of Δ USCan and average registrations. For example, Honda Accord had 50 percent USCan content in 1995 and 75 percent in 1998, a gain of 25 percentage points. Since average annual new-vehicle registrations were 364,873, the gain score is

$$.25 \times 364{,}873 = +\ 91{,}218$$

The interpretation of the gain score is that an increase of 25 percentage points in the USCan content of Honda Accords is equivalent, so to speak, to manufacturing enough additional parts in the United States and Canada to assemble 91,218 cars per year.

Among the 135 groups, only 30 increased USCan content from 1995 to 1998. The total new-vehicle registrations for the 30 gainers was, on the average, 3,554,909 per year. The sum of the gain scores for the 30 groups was 389,562 - i.e., the registration-weighted average increase in USCan content for these models was 389,562/3,554,909 = 11 percentage points.

Sixty-six groups, totaling 8,249,643 vehicles per year lost USCan content from 1995 to 1998. The sum of the gain scores was - 605,858. In other words, the sum of the losses exceeded the sum of the gains, consistent with the decline in average USCan content of the entire vehicle fleet, as reported in Section 2.2. The average reduction in USCan content among these 66 models was - 605,858/8,249,643 = - 7.3 percentage points.

Thirty-nine groups, totaling 2,351,709 vehicles per year reported exactly the same USCan content in MY 1995 and MY 1998.

Table 2-1 lists the 20 make-model groups with the most positive gain scores. Topping the list is Honda Accord, with a gain score of 91,218, thanks to a 25 percentage point increase in USCan content and a high volume of sales. Honda Civic is a close second, with a similar 25 percentage point USCan increase and slightly lower sales. In third place is the Ford F-Series truck, whose USCan content increased "only" 5 percentage points - from a high 90 to an even higher 95 - but whose sales are so large that its gain score exceeds all the remaining models.

Most important, Table 2-1 shows that 15 of the top 20 gainers are transplants of one form or another: 9 are "true" Japanese transplants (Accord, Civic, Tacoma, Altima, Corolla, Frontier, Rodeo, Passport, Legacy), 2 are Japanese transplants sold with Big 3 nameplates (Geo Prizm and Metro), 3 true import models were replaced or at least supplemented by a transplant or an

TABLE 2-1

TWENTY MAKE-MODEL GROUPS WITH GREATEST GAINS IN U.S./CANADIAN PARTS CONTENT, 1995-98

	Average USCan Content (%)			Average Annual	Gain
	1995	1998	Gain	Registrations	Score*
1. Honda Accord	50	75	+ 25	364,873	91,218
2. Honda Civic	45	70	+ 25	311,940	77,985
3. Ford F-Series	90	95	+ 5	668,480	33,490
4. Toyota Pickup/Tacoma	25	45	+ 20	133,533	26,707
5. Nissan Altima	40	55	+ 15	147,019	22,053
6. Toyota Corolla	45	55	+ 10	213,855	21,386
7. Nissan Pickup/Frontier	30	45	+ 15	118,702	17,805
8. Toyota Previa/Sienna	5	60	+ 55	26,744	14,709
9. Isuzu P'UP/Hombre	5	90	+ 85	14,853	12,625
10. Isuzu Rodeo	35	55	+ 20	61,136	12,227
11. Crown Vic/Grand Marquis	80	85	+ 5	195,707	9,785
12. Geo Prizm	50	62	+ 12	70,860	8,503
13. BMW 300/Z3	5	13.7	+ 8.7	62,423	5,461
14. Toyota 4Runner	5	10	+ 5	102,642	5,132
15. Honda Passport	35	55	+ 20	25,553	5,111
16. Subaru Legacy	35	40	+ 5	84,122	4,206
17. Explorer/Mountaineer	80	81	+ 1	410,254	4,180
18. Volkswagen Jetta	10	15	+ 5	82,007	4,100
19. Pathfinder/QX4	0	5	+ 5	81,442	4,072
20. Geo Metro	45	50	+ 5	63,894	3,195

*Gain score = USCan gain x annual registrations essentially domestic vehicle (Previa to Sienna, P'UP to Hombre, BMW 300 to 300/Z3), and 1 was a Mexican transplant (Jetta). The remaining 5 of the top 20 gainers include 3 Ford domestic models (F-Series, Crown Victoria, Explorer) and 2 Japanese true imports (4Runner, Pathfinder).

The two groups that had the largest gain in percent USCan content (although not the largest gain scores because sales volumes are not so high) are the Isuzu pickup truck, gaining from 5 to 90 when it shifted from an import (P'UP) to a domestic vehicle sold by Isuzu (Hombre); and the Toyota van, gaining from 5 to 60 when it shifted from a true import (Previa) to a true transplant (Sienna).

Table 2-2 lists the 20 make-model groups with the most negative gain scores. Topping the list are three groups of domestic Chrysler products: Neon, Caravan/Voyager/Town&Country and Dodge Ram Pickup. In fact, the **entire** list is Big 3 vehicles, 19 "true" domestics, and the Escort/Tracer, an international design produced in Ford factories. Six, including the top three are Chrysler, 10 are General Motors, and only 4 are Ford, reflecting the corporate USCan content trends reported in Section 2.7. Seven groups have a portion of their final assemblies in Mexico (Neon, Ram Pickup, Cavalier, Escort, Suburban, Tahoe, Contour) and, presumably, increased their Mexican parts content over the years.

Although the single most negative score (- 53,790) is not nearly as large as the most positive (+ 91,218), negative scores are more persistent. The 20th model in Table 2-1 is down to + 3,195 while the 20th model in Table 2-2 is still at - 10,515.

Table 2-3 lists the 15 best-selling vehicles that reported identical USCan content in 1995 and 1998. These make-models show no obvious pattern. They include 4 true domestic groups (Ranger, Saturn, Econoline, Mustang), 5 true transplants (Camry, Sentra, 626, Avalon, Eclipse), 5 true imports (Maxima, Volvo 850/70, Tercel, Mirage, Lexus ES) and the Geo Tracker (essentially a Suzuki Sidekick sold by Chevrolet).

2.9 USCan content changes in carryover vs. redesigned vs. entirely new models

In the majority of cases, this year's vehicles of a particular make-model are not too different from the past year's: they are essentially carryover models. Every four years or more, however, successful make-models are extensively redesigned: a fundamentally new vehicle is sold under the same name as last year's product. For example, the 1996 Ford Taurus is a major redesign of the 1995 Taurus. In other cases, a vehicle design and its name are both discontinued, but the manufacturer produces a new vehicle with a new name, yet aimed at more or less the same market segment, such as the 1997 Malibu replacing the 1996 Corsica as Chevrolet's mid-sized sedan. When do most of the shifts in USCan content take place? The most dramatic shifts might be expected when vehicles are redesigned or replaced. But since models carry over far more often than they are redesigned or replaced, it should come as no surprise that the cumulative bulk of the change is in carryover models.

The quantitative analysis was based on a "year-to-year" change data file. Make-model groups were defined as in the preceding section. A record was created for each of three "current" years:

TABLE 2-2

TWENTY MAKE-MODEL GROUPS WITH GREATEST LOSSES IN U.S./CANADIAN PARTS CONTENT, 1995-98

	Average USCan Content (%)			Average Annual	Gain
	1995	1998	Gain	Registrations	Score*
1. Dodge/Plymouth Neon	92	71	- 21	256,143	- 53,790
2. Caravan/Voyager/T&C	89	80.1	- 8.9	514,774	- 45,809
3. Dodge Ram Pickup	86	74	- 12	320,541	- 38,465
4. GM C/K Pickup	95	90	- 5	657,069	- 32,853
5. Grand Am/Skylark/Achieva	91	80	- 11	275,333	- 30,287
6. Cavalier/Sunfire	90	81	- 9	335,653	- 30,209
7. Escort/Tracer	79.3	71	- 8.3	330,360	- 27,393
8. LeSabre/88/Bonneville	95	86	- 9	279,949	- 25,195
9. Jeep Grand Cherokee	93	84	- 9	262,349	- 23,611
10. GM U Van	92	75	- 17	121,600	- 20,672
11. Corsica/Beretta/Malibu	91	80	- 11	182,490	- 20,074
12. Taurus/Sable	90	86.1	- 3.9	487,752	- 19,135
13. Blazer/Jimmy/Bravada	95	90	- 5	325,838	- 16,292
14. GM S/T Pickup	95	90	- 5	271,136	- 13,557
15. Jeep Cherokee	84	74	- 10	134,866	- 13,487
16. Ford Windstar	95	90	- 5	232,223	- 11,611
17. GM Suburban	95	85	- 10	112,673	- 11,267
18. Intrepid/Vision	94	86	- 8	139,611	- 11,169
19. GM Tahoe/Yukon	95	86	- 9	121,563	- 10,941
20. Contour/Mystique	80	75	- 5	210,293	- 10,515

*Gain score = USCan gain x annual registrations

TABLE 2-3

FIFTEEN HIGHEST-VOLUME MAKE-MODEL GROUPS
WITH UNCHANGED U.S./CANADIAN PARTS CONTENT, 1995-98

	Average USCan Content (%)			Average Annual Registrations
	1995	1998	Gain	
1. Toyota Camry	55	55	0	354,770
2. Ford Ranger	80	80	0	272,722
3. Saturn	95	95	0	263,541
4. Ford Econoline Van	90	90	0	165,949
5. Nissan Maxima	5	5	0	142,800
6. Ford Mustang	90	90	0	139,274
7. Nissan Sentra	45	45	0	137,703
8. Mazda 626	65	65	0	87,424
9. Toyota Avalon	60	60	0	68,517
10. Volvo 850/70	2	2	0	62,996
11. Mitsubishi Eclipse	72	72	0	61,992
12. Toyota Tercel	10	10	0	48,965
13. Mitsubishi Mirage	5	5	0	48,492
14. Lexus ES	10	10	0	46,952
15. Geo Tracker	40	40	0	37,439

1996, 1997 and 1998, consisting of the USCan content and registrations in the current and the previous model year and a description of the change, if any, in that make-model. For example, the "1996 Honda Civic" record shows USCan content of 70 in the current year (1996), 45 in the previous year (1995) and 228,874 registrations in the current year, 325,294 in the previous year. The contribution of 1996 vs. 1995 Honda Civic, a carryover make-model to overall USCan shifts is estimated by

$$\text{Gain(N)} = [\text{USCan(N)} - \text{USCan(N-1)}]\ [\text{Regs(N)} + \text{Regs(N-1)}] = .25 \times 554{,}168 = 138{,}542$$

For the three "current" years 1996, 1997 and 1998 combined, there were 72 make-model-year combinations where USCan content increased from the previous to the current year; 62 were carryover models, 7 were redesigns and 3 were replacement models with new names. The gain scores for the 62 carryover models added up to 1,196,361; the sums for the 7 redesigns and 3 replacements were 61,841 and 53,670, respectively. In other words, the overwhelming bulk of the USCan increases is in the carryover models, because they greatly outnumber the redesigns and replacement models. However, the registration-weighted average gain in USCan content is 6.6 in the carryover models, 7.8 in the redesigns and 15.7 in the replacements, indicating a potential for greater change when the model is redesigned or replaced.

Similarly, there were 126 make-model-year combinations where USCan content declined from the previous to the current year; 115 were carryover models, 8 were redesigns and 3 were replacement models. The gain scores for the 115 carryover models added up to - 1,574,401; the sums for the 8 redesigns and 3 replacements were - 137,749 and - 45,430. Here too, most of the USCan loss is in the carryover models, simply because they far outnumber the redesigned or replaced models. However, the registrations-weighted average loss in USCan content is 4.8 in the carryover models, 4.2 in the redesigns and 6.7 in the replacements.

This preponderance of USCan change in carryover models is found in both Big 3 and transplant vehicles.

CHAPTER 3

REGRESSION OF NEW VEHICLE SALES BY U.S./CANADIAN CONTENT AND OTHER FACTORS

The regulation that establishes content labels for new vehicles in accordance with the American Automobile Labeling Act (AALA) explicitly says their purpose is "to aid potential purchasers in the selection of new passenger motor vehicles by providing them with information about the value of the U.S./Canadian and foreign parts content of each vehicle."[1] Presumably, the labels would guide people who strive to "buy [North] American" and/or admire United States/Canadian (USCan) engineering and quality to favor vehicles with higher USCan parts content. Conversely, the labels might incline people who esteem the products of another nation(s) to buy vehicles with a high percentage of parts from that nation(s) (and low USCan content).

Chapter 2 showed that USCan content did not increase for the new-vehicle fleet as a whole from 1995 to 1998. In fact, it declined from 70 to 67.6 percent. Nor were there strong shifts from imported to domestic vehicles, or vice-versa in 1995, the model year the labels were introduced, or subsequently. However, the aggregate statistics do not reveal the sales trends for individual make-models. Did models that increased USCan content typically experience increases or decreases in sales? Have transplant [Big 3] vehicles with relatively high USCan content sold better or worse, since 1995, than comparable vehicles with low USCan content?

Questions like those are addressed by regression analyses of year-to-year changes in sales of individual make-models as the dependent variable and their year-to-year changes in USCan content as an independent variable. Other factors, additional independent variables, are the year-to-year change in price, the vehicle type (car, pickup truck, etc.) the nameplate type (Big 3, transplant or import), and whether or not the make-model was redesigned.

Regressions were run on the entire data base of 410 points and on many subsets. The majority of them showed an occasionally statistically significant association between increased USCan content and increased sales. Although results vary a lot, they associate, on the average, a 2 percent increase in sales with a 10 percentage-point increase in USCan content. It must be emphasized that regression results do not, by themselves, establish a causal relationship between USCan content and sales. This report does not claim that increasing USCan content made the sales go up. Indeed, a strong causal relationship is improbable, given that our consumer survey showed little or no use of the numeric USCan content score in vehicle purchasing decisions (Section 6.6). This report merely notes that models with increasing USCan content had, on the average, better sales performance than the models without it. In other words, the models that have been gaining popularity have also been gaining USCan content, but their popularity is not necessarily a consequence of their USCan content.

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[1]*Code of Federal Regulations*, Title 49, General Printing Office, Washington, 1998, Part 583.2.

Specifically, a robust regression coefficient might have been construed as evidence of a possible cause-and-effect relationship - i.e., obtaining similar regression coefficients for USCan content in the numerous regressions on subsets of the data. The coefficients in this chapter are only partially robust. On the one hand, the regression coefficients in analyses of Big 3 vehicles alone are similar to the coefficients in analyses of transplants/imports alone. But the coefficients for USCan content in passenger cars are quite positive, while the coefficients for USCan content in light trucks are mixed at best and are often negative. There does not appear to be any intuitive reason to suspect a negative effect in light trucks; if anything, truck buyers have traditionally been viewed as more interested in "buying American" than car buyers. The findings suggest that the observed relationships between USCan content and sales, although real in a statistical sense, probably have little to do with direct cause and effect.

Nevertheless, the overall results of this chapter at least suggest that increasing USCan content does not harm sales.

3.1 The data base for the regression analyses

Appendix B lists the entire data base, including all variables, used in the regression analyses. It comprises 410 data points (make-model-group/current MY combinations).

The starting point for creating the data base is the file described in Section 2.1, consisting of 298 individual make-models of passenger cars, pickup trucks, SUVs and vans with a gross vehicle weight rating (GVWR) of 8,500 pounds or less, sold in the United States during at least one model year from 1994 to 1998. The file specifies, for each model year, the USCan content on the AALA label (MY 1995-98 only), the production-model-year registrations (1994-98) and the base sticker price (1994-98). It is listed in Appendix A.

However, production-model-year registrations are inappropriate here. Registration data derive from R. L. Polk files, where the "production" model year is based on the 10^{th} character of the Vehicle Identification Number (VIN). The length of a manufacturer's "model year production run" is sometimes 12 months, but it can also be substantially longer or shorter. That makes it difficult to compare a make-model's sales from one model year to the next, because one might be based on a longer production run than the other.

In this chapter, vehicles will be grouped by their **"sales" model year**: all vehicles sold between October 1 of year N-1 and September 30 of year N, regardless of their actual production model year, are classified in sales model year N. Sales statistics by make-model for sales model years 1994-98 were compiled from *Automotive News*. Sales can easily be compared year to year, because they are based on 12-month periods. The analysis is done with the caveat that vehicles of sales-model-year N may include some vehicles of production year N-1 (holdovers) or N+1 (early introductions), whereas the AALA label information for model year N pertains specifically to vehicles of production year N. Thus, the sales data are not an exact match for the AALA label data.

This file in Appendix A also has too many individual make-models for our purpose. It was condensed and abridged to 116 high-volume make-model groups (MMG), to facilitate year-to-year comparisons of sales, USCan parts content and base sticker price:

- In Appendix A, models that were substantially redesigned are listed separately (e.g., 1994-96 Toyota Camry and 1997-98 Toyota Camry); here, they are combined to make a single MMG.

- Similarly, if a manufacturer produced a model in 1994, say, and then essentially replaced it in 1995-98 by another model with a new name but in the same market class - e.g., Hyundai Excel and Accent, both economy cars - these two models, together, form one MMG produced from 1994 through 1998.

- Also, when one company sold two or more models of identical or similar design under different nameplates (corporate twins), with identical or similar USCan content, they were grouped together - e.g., Buick LeSabre, Olds 88 and Pontiac Bonneville.

- Make-models with low sales volume often have extreme sales fluctuations and are poor candidates for regressions of year-to-year sales trends. The MMGs in this analysis all average at least 20,000 sales per year. These more popular models/groups have relatively smoother, more predictable sales trends.

Whenever two or more individual make-models are combined into a single MMG, the MMG sales for each model year are the sums of the sales of the constituent models. The price and USCan content are the sales-weighted averages of the individual values.

Even when MMGs contain more than one make-model, they are all the same type of vehicle: passenger car, pickup truck, sport utility vehicle (SUV) or van. Thus, each MMG is assigned a single "vehicle type" code.

Each MMG is coded "Big 3," "Transplant" or "Import." Big 3 comprises all vehicles sold with one of the nameplates of the Big 3 domestic manufacturers, regardless of where it was produced or designed. In the nomenclature of Section 2.4, they include "true domestics" such as Dodge Caravan, Mercury Grand Marquis, Saturn, etc.; "international designs assembled in Big 3 factories," such as Ford Escort; "transplant vehicles sold with Big 3 nameplates" such as Geo Prizm; and "captive imports" such as Cadillac Catera. Transplants are all make-models with nameplates of foreign-based companies but assembled exclusively or primarily in the United States or Canada. They include "true transplants" such as Honda Accord, Toyota Tacoma, Mazda 626, etc. and "Big 3 designed/built vehicles with foreign-based nameplates" such as the Mazda pickup truck. Imports are all make-models with foreign-based nameplates assembled exclusively or primarily outside the United States or Canada. They include "true imports" such as Nissan Pathfinder, Mercedes E-class, Lexus ES, etc.; "Mexican transplants" such as Volkswagen Jetta; and "part-time transplants" such as Hyundai Sonata (however, none of the latter met the 20,000 sales per year criterion).

The next step is to transform the MMG-oriented file of 116 records into an MMG*MY file containing 410 records showing the change in sales, price and USCan content from the preceding year to the current year. This file contains one record for each MMG in each model year (1995-98) for which vehicles of that MMG were sold in that year and in the preceding year. These 410 records become the data points for the regression analyses. For example, the MMG consisting of the single make-model Ford Mustang (sold throughout 1994-98) generates four records with the "current" model year 1995, 1996, 1997 and 1998, respectively:

	Current Model Year			Preceding Model Year		
Current MY	Sales	Price	USCan	Sales	Price	USCan
1995	138,867	14,530	90	147,744	13,365	Unknown
1996	129,718	15,180	90	138,867	14,530	90
1997	112,311	15,880	80	129,718	15,180	90
1998	136,488	16,675	90	112,311	15,880	80

Sales declined relative in 1995 (relative to 1994), 1996 (relative to 1995) and 1997 (relative to 1996) but rose in 1998 (relative to 1997). The base sticker price rose every year. USCan parts content was unchanged in 1996 (relative to 1995), declined in 1997 (relative to 1996) but rose in 1998 (relative to 1997).

The dependent variable in the regressions will be the natural logarithm of the ratio of the sales of the current to the preceding model year,

$$\Delta\_\text{Sales} = \log [\text{Sales(MY)} / \text{Sales(MY-1)}]$$

Similarly, one of the independent variables is the natural logarithm of the price ratio:

$$\Delta\_\text{Price} = \log [\text{Price(MY)} / \text{Price(MY-1)}]$$

Log ratios of sales and price are often used in econometric analyses like these because they tend to have fairly linear relationships with one another. Another advantage is that the resulting model predicts by how many percent sales will change for each 1 percent increase in price ("elasticity"). The independent variable pertaining to USCan content, for "current" model years 1996-98 is the arithmetic difference in the proportions of USCan content this year and the preceding year, as reported to NHTSA:

for MY 1996-98: $\Delta\_\text{USCan} = .01\ [\text{USCan(MY)} - \text{USCan(MY-1)}]$

The reason for multiplying by .01 (changing percents to proportions) is to put Δ_Sales, Δ_Price and Δ_USCan on the same magnitude basis: a value of .01 corresponds to a 1 percent sales increase, a 1 percent price increase, and a 1 percentage point USCan increase. Regression coefficients will measure the elasticity of the relationships.

When the "current" model year is 1995, the preceding year's USCan content is unknown, since there were no labels in MY 1994. The definition of Δ_USCan for 1995 is based on the following rationale: in 1995, consumers gained the ability to differentiate the USCan content of one make-model from another. Before that, they did not have information to differentiate individual make-models. But they were not completely uninformed. Even the average consumer could probably distinguish a Big 3 vehicle from a foreign-based nameplate. However, the subgroup who were truly interested in content and country of origin - the types most likely to be reading the labels starting in 1995 - likely knew more than the average consumer. Many of this subgroup probably could distinguish transplants from imports among vehicles with foreign-based nameplates, based on magazine articles, brochures, inquiries to dealers, etc. In other words, in 1994, they could classify vehicles as Big 3, transplant, or import, but they could not differentiate USCan content within those three categories. They could only assume that each make-model was at the average for its category. In 1995, they could differentiate. Since Δ_USCan should represent the change in information from one year to the next, Δ_USCan for 1995 ought to be the difference between the actual USCan content for that specific make-model and the average USCan content for all make-models in its class - Big 3, transplant, or import, as the case may be. Based on the methods of Chapter 2, the average percentages of USCan content in 1995 were 90.09 percent for the Big 3 (excluding transplants and imports sold with Big 3 nameplates, as will be explained below), 48.39 percent for transplants sold by foreign-based companies, and 4.69 percent for imports sold by foreign-based companies. Thus,

for MY 1995:	Δ_USCan =	.01 [USCan(95) - 90.09]	for Big 3 vehicles
		.01 [USCan(95) - 48.39]	for transplants
		.01 [USCan(95) - 4.69]	for imports

Big 3 vehicles ordinarily include "true domestics," "international designs assembled in Big 3 factories," "transplant vehicles sold with Big 3 nameplates" and "captive imports." An exception must be made for 1995. Six Big 3 MMGs in 1995 are not "true domestics" in the nomenclature of Section 2.4: Escort/Tracer, Ford Probe, Ford Aspire, Geo Prizm, Geo Metro and Geo Tracker. Content-sensitive consumers would probably have known that Ford Aspire was a Korean import and would never have expected it to have 90.09 percent USCan content; thus, Δ_USCan = .01 [USCan(95) - 90.09] does not make sense for Ford Aspire; indeed, it is not clear what they would have expected. As a result, the 1995 Ford Aspire is not included in the file, although the 1996 and 1997 Aspires are included, with Δ_USCan = .01 [USCan(MY) / USCan(MY-1)]. By the same token, the "Geo" nameplate would immediately signal content-sensitive consumers that Prizm, Metro or Tracker have less USCan content than the typical Big 3 vehicle; these, too, are excluded in 1995. On the other hand, even content-sensitive consumers were likely unaware of the Mazda heritage in Escort/Tracer and expected it to have typical Big 3 USCan content; it is included for 1995. Ford Probe is in-between: the Mazda influence is stronger and probably better known than for Escort/Tracer, although there is no unique nameplate like "Geo"; since there is doubt, it's best to leave it out for 1995.

By the same logic, content-sensitive consumers were likely unaware that Nissan Quest and the Mazda pickup were qualitatively more U.S./Canadian than the typical transplant; both of these MMGs are included with transplants, and Δ_USCan = .01 [USCan(95) - 48.39] makes sense for

1995. Volkswagen Jetta and Golf, although technically "Mexican transplants," are probably viewed the same as other imports; these MMGs are included with imports, and Δ_USCan = .01 [USCan(95) - 4.69] in 1995.

The regression data points will be weighted by the sum of the current and preceding model year's sales. Thus, in the case of Ford Mustang, the sales, price and USCan data shown above yield the following variables for the regressions:

MY	Δ_Sales	Δ_USCan	Δ_Price	Weight Factor
1995	- .062	- .0009	+ .084	286,611
1996	- .068	.000	+ .044	268,585
1997	- .144	- .100	+ .045	242,029
1998	+ .195	+ .100	+ .049	248,799

In these four data points it is evident that sales increased in the one year that USCan content went up, and sales declined when USCan content went down or stayed the same. If the remaining 406 data points all had the same pattern (they don't, of course), there would be a very strong association between sales and USCan content.

Another independent variable is defined at the MMG*MY level. It is a nominal (non-numeric) variable with 11 categories. It identifies ten actions or conditions that are likely to increase or reduce sales from the previous model year, such as: redesign of the model, introduction of new models, introduction of competitors. The 11th category, "no change" indicates none of these ten apply. The ten change categories are:

1. Redesign, same name (e.g., 1997 Toyota Camry): extensive redesign of a model may stimulate sales and is often accompanied by a price increase.

2. Redesign, new name - one model replaces another in the same market class (e.g., 1997 Expedition replaces 1996 Bronco as Ford's full-sized SUV): introduction of a new model can greatly spur sales, especially if the old model was no longer a good seller. Price may also increase.

3. Last year before redesign, same name (e.g., 1995 Mercedes E-class): sales occasionally drop off as customers tire of the old design and wait for the new one.

4. Last year before redesign, new name (e.g., 1997 Volvo 850, which was replaced by 1998 Volvo S70): sales may decline as customers tire of the old design and wait for the new.

5. Last year it existed (e.g., 1996 Caprice/Roadmaster): sales often plunge as models are phased out; conversely manufacturers may abruptly phase out models whose sales plunge.

6. Additional name introduced in an existing MMG (e.g., in 1996, Plymouth Breeze joined Dodge Stratus and Chrysler Cirrus): usually increases net sales for the MMG.

7. One name dropped from an existing MMG (e.g., in 1998, Eagle Vision was dropped and only Dodge Intrepid remained): usually decreases net sales for the MMG.

8. Competitor introduced in the same market class, sometimes by the same manufacturer (e.g., 1995 Ford Aerostar is in this category, because Ford Windstar was introduced at that time): can reduce sales [of Aerostar, in this example] drastically.

9. Second year the MMG existed[2] (e.g., 1996 Honda Odyssey): sales in the second year are often higher than in the first, partly because the new model needs time to catch on, partly due to the technicality that the first year is sometimes less than a full year.

10. Second year after a redesign or renaming (e.g., 1996 Subaru Legacy): sales in the second year are often higher than in the first, partly because the new design needs time to catch on, partly due to the technicality that the first year is sometimes less than a full year.

The entire file of 410 data points is listed in Appendix B. It includes 264 cases where none of the above ten change categories apply (these are superior regression candidates), and 146 cases that fit into one of the change categories.

3.2 Regression examples and strategy

The initial regression encompasses all 410 data points, as shown in Table 3-1. The dependent variable is Δ_Sales; the independent variables are the continuous parameters Δ_USCan and Δ_Price and the nominal variables Nameplate (Big 3, transplant or import), Vehicle Type, Model Change Code and Current Model Year. Each data point (MMG-current MY combination) is weighted by the sum of the current and preceding year's sales. The analysis is performed by the General Linear Model (GLM) procedure on the Statistical Analysis System (SAS)[3]. This model has an overall F value of 5.45 ($p < .0001$, given that there are 20 model degrees of freedom and 389 error df). R-squared is .2153. In other words, some of the independent variables are strongly associated with the year-to-year change in sales, enough to make the overall model highly significant; yet, at the same time, it is no surprise that these independent variables, by themselves do not explain every change in sales.

The most important statistic for this study is the regression coefficient of Δ_USCan, + .04144. This is a weak positive correlation, and it is not statistically significant ($t = 0.23$, $p > .05$). For statistical significance at the two-sided .05 level, the absolute value of t would have to exceed as little as 1.97 or as much as 2.13 in the regressions of this chapter, depending on the error degrees

[2]"First year an MMG existed" is not a possible category for a data point in the regressions. All data points are for MMGs that existed in the current and the preceding year, otherwise Δ_Sales cannot be defined.

[3]*SAS/STAT User's Guide, Version 6, Fourth Edition,* Volume 2, SAS Institute, Cary, NC, 1989, pp. 891-996.

TABLE 3-1: INITIAL REGRESSION ANALYSIS,
ALL MAKE-MODEL GROUPS IN 1995-98

Dependent variable:	Δ_SALES (log of the ratio of current MY to preceding MY sales)
Aggregation method:	by make-model group and current model year
N of observations:	410
Weighting factor:	SALES_2Y (sum of current MY and preceding MY sales)
Degrees of freedom:	20 model, 389 error
Model F value:	5.34 (p = .0001)
R-square:	.2153

REGRESSION COEFFICIENTS

Parameter	Estimate	t for H0: Parameter=0	Pr > |t|
INTERCEPT	- .01205	- 0.48	.6337
Δ_USCAN	**.04144**	**0.23**	**.8206**
Δ_PRICE	- .72895	- 2.66	.0081
NAME_PLT			
BIG 3	.00000	.	.
TRANSPLANT	- .00111	- 0.04	.9696
IMPORT	- .00014	- 0.00	.9969
VEH_TYP			
CAR	.00000	.	.
PICKUP	.05544	2.03	.0435
SUV	.15181	4.80	.0001
VAN	- .00741	- 0.22	.8268
CHG_MODL			
NO CHANGE	.00000	.	.
REDES SAME NAME	.01767	0.48	.6328
REDES NEW NAME	.33526	3.49	.0005
LAST YR BF REDES	.00755	0.19	.8467
LAST YR BF RENAM	- .09154	- 1.25	.2134
LAST YR IT EXIST	- .39261	- 4.50	.0001
ADDL NAME INTROD	.12775	1.35	.1763
ONE NAME DROPPED	- .49985	- 2.85	.0046
COMPETITOR INTRO	- .30152	- 3.18	.0016
2ND YR IT EXIST	.17681	2.79	.0055
2ND YR AFT REDES	.10845	3.10	.0021
CURR_YR			
1995	.00273	0.09	.9286
1996	.01890	0.65	.5150
1997	.00265	0.08	.9326
1998	.00000	.	.

of freedom (df), and for the two-sided .01 level, 2.6 to 2.95. A two-sided test is appropriate when, as in this case, there is no specific "right" or "expected" direction for the effect.

The coefficient says that each 1 percentage-point increase in USCan content is associated with a 0.04 percent increase in sales. In other words, models that increased from 50 to 60 percent USCan content, or from 80 to 90, or from 5 to 15 experienced, on the average, a 0.4 percent increase in sales, after controlling for the other independent variables. Not a big change.

The regression coefficients for the other independent variables are intuitively reasonable. The coefficient for Δ_Price is a strong - .72895 and it is statistically significant ($t = -2.66$, $p < .01$). We expect a negative coefficient for Δ_Price - i.e., when prices are increased, all else being equal, sales should decline. In econometric terminology, the sales-price elasticity is - .72895: when prices increase by 1 percent, sales drop by 0.73 percent. This coefficient, however, needs to be interpreted with caution. As stated at the beginning of this chapter, regressions do not clarify what is the "cause" and what is the "effect," if indeed there is any cause-and-effect relationship at all. Sometimes sales influence prices rather than the other way around. A manufacturer might raise prices, to maximize profits, if a model sells very well. In that case, the observed price-sales elasticity could be positive, rather than the usual negative. Although this regression produced a strong negative coefficient for Δ_Price, others might not.

The intercept is - .012, indicating that a passenger cars USCan content, price or design lost 1.2 percent sales per year. The coefficients for Big 3, Transplant and Import are all close to zero, indicating little market shift from one of these to another in 1995-98. The coefficients for Pickup, SUV and Van are measured relative to Car (which is arbitrarily assigned a zero effect). The model says that pickups and especially SUVs did significantly better than cars, while vans did about the same. SUV sales gained about 15 percent per year relative to cars.

Relative to MMGs that were essentially unchanged from one year to the next, sales gained substantially for MMGs that were redesigned with a new name (e.g., Ford Bronco to Expedition), or if a new make-model was added to an existing MMG (e.g. Plymouth Breeze to Dodge Stratus and Chrysler Cirrus in 1996) or for MMGs in the second year of their existence or in the second year after a redesign/rename. Sales plunged in the last year of an MMG's existence, or when one of the make-models in an MMG was dropped, or an important competitor was introduced. The effects for Current Model Year are all weak, indicating a relatively smooth overall sales trend from 1995 to 1998, without strong intermediate ups and downs.

The weakest feature of the regression in Table 3-1 is the inclusion of all the models that had changed from one year to the next. Intuitively, it is much harder to predict sales when models are substantially redesigned - some new designs prosper and others flop - than when models are the same from year to year. Mathematically, since there are only a few data points in each of the ten change groups, it is difficult for the regression to differentiate the effects of model changes from the effects of other variables: e.g., did those few models that faced a new competitor sell so poorly for that reason alone, or was it in part because they also raised prices and/or lowered USCan content?

A more attractive approach, illustrated in Table 3-2, is to limit the regression to MMGs that were essentially unchanged from the previous year, that did not fit into any of the ten change categories. The penalty is that the sample is reduced from 410 to 264 data points. This model also has a highly significant overall F value of 2.40 ($p < .001$, 10 model df, 253 error df). R-squared is .0865. Although that is lower than the .2153 in the preceding regression, this is not an inferior model: it is true we eliminated one of the best explanatory variables, Model Change, but we also eliminated all the variance explained by that variable by excluding the data points with model changes. Although R-squared is lower, the mean-square-error dropped by 40 percent.

The regression coefficient for Δ_USCan, + .29028, is much higher than in the first model, but it is still not statistically significant at the two-sided .05 level ($t = 1.68$). The coefficient says that each 1 percentage-point increase in USCan content is associated with a 0.3 percent increase in sales. In other words, models that increased from 50 to 60 percent USCan content, or from 80 to 90, or from 5 to 15 experienced, on the average, a 3 percent increase in sales, after controlling for the other independent variables. It bears repeating that this is not significant and not necessarily a cause-and-effect relationship. But if the relationship were cause-and-effect, would a sales increase of this magnitude be plausible? The consumer survey found that only 7 percent of new-vehicle purchasers actually read the label at a dealership (Section 6.4), and none of these individuals explicitly stated they had used the USCan content scores to comparison-shop among make-models, or that they had selected or rejected a specific vehicle because of its high or low USCan parts content (Section 6.6). That a major boost in USCan content could directly cause a sales increase of 3 percent is improbable given the survey findings.

The coefficient for Δ_Price in Table 3-2 is negative, as in Table 3-1, but not nearly as strong. The coefficients for the other variables are about the same in both regressions: little effect for Nameplate and Current-MY, a strong sales increase for pickup trucks and, especially, SUVs relative to passenger cars. Given that Nameplate and Current-MY are not significant in either regression, it might be desirable to drop them for parsimony and to raise overall F. However, in GLM models the inclusion of a few extraneous variables usually has little influence on the important coefficients; these variables will be retained because they might conceivably be significant in some subsets of the data that will be candidates for subsequent regressions.

Another possible shortcoming of both preceding regressions is that they contain some data points representing extraordinary year-to-year changes in sales. Sometimes a make-model's sales will increase 50 or 100 percent from one year to the next, or decrease by 50 percent, for idiosyncratic reasons that cannot be boiled down to regression parameters. Sales fluctuations of that magnitude could hardly be due to USCan content. But if USCan content happened to have gone up or down in the year of a big sales change, it could sway the regression to give unwarranted weight to that data point in calibrating the Δ_USCan-Δ_Sales relationship. Intuitively, it seems desirable to eliminate the potential distorting effect of these outliers by restricting the regressions to data points with Δ_Sales within certain reasonable bounds. The strategy will be to perform each regression first with all available data points, and then on subsets with successively narrower ranges of Δ_Sales:

TABLE 3-2

REGRESSION ANALYSIS FOR ALL UNCHANGED MAKE-MODEL GROUPS IN 1995-98

Dependent variable:	Δ_SALES (log of the ratio of current MY to preceding MY sales)
Aggregation method:	by make-model group and current model year
N of observations:	264
Weighting factor:	SALES_2Y (sum of current MY and preceding MY sales)
Degrees of freedom:	10 model, 253 error
Model F value:	2.40 (p = .0098)
R-square:	.0865

REGRESSION COEFFICIENTS

Parameter	Estimate	t for H0: Parameter=0	Pr > |t|
INTERCEPT	- .03607	- 1.64	.1031
Δ_USCAN	**.29028**	**1.68**	**.0947**
Δ_PRICE	- .20523	- 0.71	.4774
NAME_PLT			
BIG 3	.00000	.	.
TRANSPLANT	.02030	0.75	.4512
IMPORT	.02159	0.60	.5516
VEH_TYP			
CAR	.00000	.	.
PICKUP	.05568	2.17	.0310
SUV	.11511	4.01	.0001
VAN	- .00180	- 0.05	.9569
CURR_YR			
1995	.02841	1.03	.3063
1996	- .00364	- 0.13	.8933
1997	.00218	0.07	.9413
1998	.00000	.	.

Lower and Upper Limits on Δ_Sales:

Lower limit	- .7	- .6	- .5	- .4	- .3	- .2
Upper limit	+ .7	+ .6	+ .5	+ .4	+ .3	+ .2

Corresponds to Year-to-Year Percentage Changes in Sales:

Decrease no more than	- 50	- 45	- 39	- 33	- 26	- 18	percent
Increase no more than	+ 100	+ 82	+ 65	+ 49	+ 35	+ 22	percent

For example, only 11 of the 410 data points in Table 3-1, and only 2 of the 264 data points for unchanged MMGs in Table 3-2 had Δ_Sales outside the ± .7 range. It seems plausible to exclude the few cases where sales were halved or doubled, since something happened in those models obviously unrelated to USCan, price, or any of the other variables in the regression. Without those points, the regression ought to fit the data better and, intuitively, it ought to calibrate the Δ_USCan effect better. Δ_Sales limits of ± .6, ± .5 or ± .4 likewise exclude only small numbers of data points with sales changes generally beyond what could likely be attributed to the parameters in our regressions; perhaps they could further refine the calibration of the Δ_USCan coefficient. But the Δ_Sales limits should not be allowed to shrink beyond ± .3 or ± .2, because substantial numbers of data points are excluded and the year-to-year changes get into a range that could be due to parameters in our regressions.

No theoretical statistical basis is claimed for this consecutive truncation of the range of the dependent variable. Nevertheless, repeating the analysis for the full data set with the six truncated sets ought to provide a better empirical impression of the robustness of the Δ_USCan coefficient.

The 14 principal regressions of this chapter are: the analysis of the full 410-point data set, already shown in Table 3-1; six successive truncations of that data set, as described above; the analysis of 264 data points for unchanged MMGs, shown in Table 3-2; and six successive truncations of the unchanged data points.

The next strategy is to analyze subsets of the motor vehicle fleet: regressions of only the Big 3 vehicles, or only those with foreign-based nameplates (transplants plus imports), or just the transplants; regressions of just passenger cars, and within that subset, just cars with Big 3 nameplates, with foreign-based nameplates, and just transplants; and regressions for light trucks, and subgroups of light trucks. The numerous regressions help to gauge the robustness of the results. If the Δ_USCan coefficients vary a lot among subgroups without any intuitively reasonable explanation, it could be a sign that the association between increasing popularity and increasing USCan content is more coincidental than systematic. Moderately consistent results would at least support, although not necessarily prove, an organic link.

At the same time, however, it is interesting to look at subsets because real differences in how consumers view USCan content could be reflected in the Δ_USCan coefficients. For example, the data in Section 6.2 indicate that consumers of Big 3 vehicles are, on the average, more concerned about "buying American" than people who buy imports. If so, that could portend a more positive Δ_USCan coefficient in the regression limited to Big 3 vehicles than in an analysis of imports. On the other hand, maybe people who buy transplants are the most likely to use the labels, because there are substantial differences in USCan content within the transplant group, so we could see the most positive coefficients in the analyses of transplants. There may also be a public perception that people who drive light trucks care more about USCan content than car drivers. Maybe the historically higher market shares of the Big 3 in trucks than cars have fed that perception. Is the Δ_USCan coefficient higher in the light truck analyses?

3.3 Regression results

Table 3-3 presents, in two pages, the Δ_USCan coefficients in 56 regression analyses of passenger cars and light trucks, combined - i.e., the percentage sales increase associated with a 1 percentage point increase in USCan content from the preceding model year to the current one. The first set of numbers in Table 3-3 represent the regression on the full data set of 410 MMG-MY combinations, already documented in Table 3-1. The Δ_USCan coefficient is + .04, and it is not statistically significant ($t = .23$, $p > .05$). As stated above, the coefficient says that each 1 percentage-point increase in USCan content is associated with a 0.04 percent increase in sales.

The second entry in the "all make-model groups" section of Table 3-3 calibrates the Δ_USCan coefficient after excluding 11 data points with |Δ_Sales| > .7 - i.e., cases where sales increased by more than 100 percent or decreased by more than 50 percent from the preceding year. The regression based on the remaining 399 points has about the same F value as the initial regression in Table 3-1 (4.77 vs. 5.34) and about the same R-squared (.2016 vs. .2152), but the mean-square residual error is reduced by 36 percent. The Δ_USCan coefficient rises to + .13, but it is still not statistically significant ($t = .85$, $p > .05$). The coefficients for the other independent variables are usually close to the values in Table 3-1; for example Δ_Price has a - .601 coefficient. One exception is the coefficient for "redesigned with a new name": some of the outliers that were excluded were redesigns with new names that experienced sales increases over 100 percent; without those outliers, the coefficient is much smaller than in Table 3-1, although still positive.

The remaining five coefficients in the first section of Table 3-3, "all make-model groups," are relatively stable: .13, .08, .11, .13, and .19. As the allowed range of Δ_Sales contracts and more outliers are excluded, the N of data points shrinks, slowly at first but more rapidly at the end: 410, 399, 391, 378, 363, 332 and 285. Even though N gets smaller, t-values increase because getting rid of the outliers increases the signal-to-noise (residual error) ratio. For example, the second, third and sixth regression all produce coefficients of .13, but their t-values are .85, .94 and 1.23, respectively. The last of these regressions produced a Δ_USCan coefficient that is statistically significant ($t = 2.10$, $p < .05$).

The second section of Table 3-3, "all unchanged make-model groups," probably has the most meaningful results because it is limited to MMGs that were essentially the same as the previous year and excludes the sales-distorting effects of models being introduced, redesigned or discontinued. The first entry is based on the full set of 264 unchanged-MMG data points and it has already been documented in Table 3-2. The Δ_USCan coefficient is + .29 and it is not

TABLE 3-3

ALL VEHICLES: SALES INCREASE (%) PER 1 PERCENT INCREASE IN U.S./CANADIAN CONTENT, MY 1995-98

coefficients for Δ_USCan in the regressions of Δ_Sales by Δ_USCan and other variables in 116 high-volume make-model groups
Δ_USCan = U.S./Canadian content on current MY AALA label - content on preceding MY AALA label ‡
Δ_Sales = log (current MY sales) - log (preceding MY sales)

		Limited to make-model groups with sales changes in the following ranges:						
	Sales increase (%) no more than:	Any	100	82	65	49	35	22
	Sales decrease (%) no more than:	Any	-50	-45	-39	-33	-26	-18
All make-model groups	coefficient	.04	.13	.13	.08	.11	.13	.19
	t-value	.23	.85	.94	.56	.88	1.23	2.10*
	N of data points	410	399	391	378	363	332	285
All unchanged make-model groups	coefficient	.29	.26	.26	.25	.26	.30	.30
	t-value	1.68	1.53	1.69	1.67	1.81	2.45*	2.77**
	N of data points	264	262	258	253	250	230	204
Big 3 make-model groups	coefficient	- .31	- .05	- .06	- .06	.10	.26	.36
	t-value	- 1.01	- .22	- .25	- .26	.55	1.51	2.27*
	N of data points	230	224	221	213	204	189	163
Unchanged Big 3 groups	coefficient	.26	.23	.24	.23	.24	.44	.41
	t-value	.94	.83	1.01	.99	1.06	2.18*	2.30*
	N of data points	156	155	153	150	149	140	124

* coefficient is statistically significant at the .05 level.
** coefficient is statistically significant at the .01 level.
‡ in 1995, Δ_USCan = USCan(95) - 90.09 for Big 3; USCan(95) - 48.39 for transplant; USCan(95) - 4.69 for import.

TABLE 3-3 (continued)

		Limited to make-model groups with sales changes in the following ranges:						
Sales increase (%) no more than:		Any	100	82	65	49	35	22
Sales decrease (%) no more than:		Any	-50	-45	-39	-33	-26	-18
Transplant/imported groups	coefficient	.27	.14	.14	.17	.21	.07	.09
	t-value	1.44	.85	.90	1.12	1.49	.62	.88
	N of data points	180	175	170	165	159	143	122
Unchanged transplants/imports	coefficient	.43	.38	.34	.36	.39	.22	.20
	t-value	2.06*	1.89	1.80	1.90	2.22*	1.47	1.61
	N of data points	108	107	105	103	101	90	80
Transplant make-model groups	coefficient	.02	.02	.02	.06	.06	- .04	.04
	t-value	.14	.14	.14	.37	.37	- .30	.33
	N of data points	69	69	69	68	68	64	60
Unchanged transplant groups	coefficient	.35	.35	.35	.35	.35	.22	.23
	t-value	1.62	1.62	1.62	1.62	1.62	1.29	1.56
	N of data points	44	44	44	44	44	41	40

* coefficient is statistically significant at the .05 level.

statistically significant ($t = 1.68$, $p > .05$). The other entries in that section, with truncated ranges of Δ_Sales, produce virtually the same Δ_USCan coefficients: .26, .26, .25, .26, .30 and .30. N shrinks slowly here, because most of the unchanged MMGs do not have volatile year-to-year sales shifts: 264, 262, 258, 253, 250, 230 and 204. The last two Δ_USCan coefficients are statistically significant at the .05 and .01 levels, respectively.

The simple arithmetic average of the 14 Δ_USCan coefficients in the first two sections of Table 3-3 is a heuristic indicator of the central tendency in these analyses. That average is .2. In other words, a 10 percentage-point increase in USCan content is associated with a 2 percent increase in sales. No claim is made that this is the "best," unbiased estimate from the data, nor have any error bounds been computed for it.

The next two sections of Table 3-3 limit the analyses to vehicles with Big 3 nameplates. They account for somewhat over half the data points. The regression procedure is the same as above, except that the Nameplate variable is omitted, since all data points have Big 3 nameplates. The initial regression, based on all 230 "Big 3" data points, yields a Δ_USCan coefficient of - .31, negative, but not statistically significant ($t = -1.01$). Truncating the allowed range of Δ_Sales to ± .7 weakens the coefficient to - .05. It stays at that level for two more truncations and then changes sign and even becomes a statistically significant + .36 when $|\Delta\_Sales| \leq .2$ ($t = 2.27$, $p < .05$). The regression results for unchanged Big 3 MMGs are more stable. The analysis for all 156 unchanged points produces a Δ_USCan coefficient of + .26 that is not statistically significant ($t = .94$). The first four truncated analyses produce nearly the same results. The last two regressions produce higher coefficients, .44 and .41 that are both statistically significant.

The second page of Table 3-3 analyzes non-Big 3 cars (transplants and imports). The first two sections of this page analyze transplants and imports together. The regressions include the Nameplate variable, and it has two possible values: transplant or import. In the uppermost section, where all transplant/import MMGs are included, the Δ_USCan coefficients range from + .07 to + .27. None of them are statistically significant. In the analyses of unchanged transplant/import MMGs, the coefficients are slightly higher, ranging from + .20 to + .43; the first and the fifth are statistically significant at the .05 level.

When the regressions are limited to transplant models only, and all of these are included, even the ones with redesigns, etc., the Δ_USCan coefficients are close to zero, ranging from - .04 to + .06. However, when the analyses are further limited to transplants without important year-to-year model changes, the coefficients are all positive, ranging from + .22 to + .35.

Table 3-3 shows more or less the same relationship between Δ_USCan and Δ_Sales for Big 3, transplant and import vehicles, or at least that the relationship is not obviously stronger in one of the groups than in the others.

The two pages of Table 3-4 display all the regressions in Table 3-3, but for **passenger car** MMGs only. Just under two-thirds of the MMGs are passenger cars. The regression procedure is the same as in Table 3-3, except that the Vehicle Type variable is omitted, since all vehicles are cars. It is immediately noticeable that the coefficients are more positive than in Table 3-3, often

TABLE 3-4

PASSENGER CARS: SALES INCREASE (%) PER 1 PERCENT INCREASE IN U.S./CANADIAN CONTENT, MY 1995-98

coefficients for Δ_USCan in the regressions of Δ_Sales by Δ_USCan and other variables in 78 high-volume make-model groups
Δ_USCan = U.S./Canadian content on current MY AALA label - content on preceding MY AALA label ‡
Δ_Sales = log (current MY sales) - log (preceding MY sales)

		Limited to make-model groups with sales changes in the following ranges:						
	Sales increase (%) no more than:	Any	100	82	65	49	35	22
	Sales decrease (%) no more than:	Any	-50	-45	-39	-33	-26	-18
All make-model groups	coefficient	.30	.41	.42	.43	.41	.34	.35
	t-value	1.22	2.06*	2.30*	2.47*	2.72**	2.69**	3.18**
	N of data points	267	261	255	247	235	213	179
All unchanged make-model groups	coefficient	.54	.54	.51	.49	.52	.46	.43
	t-value	2.61**	2.61**	2.71**	2.70**	2.98**	3.06**	3.31**
	N of data points	169	169	167	163	160	146	128
Big 3 make-model groups	coefficient	.37	.50	.51	.55	.54	.55	.63
	t-value	.86	1.40	1.54	1.72	2.05*	2.38*	3.14**
	N of data points	137	133	131	126	118	108	88
Unchanged Big 3 groups	coefficient	.71	.71	.70	.67	.69	.72	.63
	t-value	1.96	1.96	2.19*	2.17*	2.31*	2.62*	2.62*
	N of data points	89	89	88	86	85	79	67

* coefficient is statistically significant at the .05 level.
** coefficient is statistically significant at the .01 level.
‡ in 1995, Δ_USCan = USCan(95) - 90.09 for Big 3; USCan(95) - 48.39 for transplant; USCan(95) - 4.69 for import.

TABLE 3-4 (continued)

		Limited to make-model groups with sales changes in the following ranges:						
	Sales increase (%) no more than:	Any	100	82	65	49	35	22
	Sales decrease (%) no more than:	Any	-50	-45	-39	-33	-26	-18
Transplant/imported groups	coefficient	.30	.34	.33	.35	.39	.19	.15
	t-value	1.22	1.59	1.67	1.77	2.14*	1.30	1.12
	N of data points	130	128	124	121	117	105	91
Unchanged transplants/imports	coefficient	.50	.50	.45	.47	.53	.32	.26
	t-value	2.02*	2.02*	1.94	2.07*	2.50*	1.95	1.73
	N of data points	80	80	79	77	75	67	61
Transplant make-model groups	coefficient	.26	.26	.26	.26	.26	.15	.16
	t-value	1.10	1.10	1.10	1.10	1.10	.82	.94
	N of data points	45	45	45	45	45	42	40
Unchanged transplant groups	coefficient	.46	.46	.46	.46	.46	.31	.31
	t-value	1.73	1.73	1.73	1.73	1.73	1.62	1.62
	N of data points	30	30	30	30	30	28	28

* coefficient is statistically significant at the .05 level.

reaching statistical significance at the .01 level. The 14 regression results for all passenger car MMGs (first two sections of Table 3-4) produce Δ_USCan coefficients ranging from + .30 to + .54. Ten of the 14 are significant at the .01 level and only one is not statistically significant. Δ_USCan coefficients are even larger when the data are limited to Big 3 passenger cars, ranging from + .37 to + .72, and eight of them are statistically significant. The second page of Table 3-4 shows positive Δ_USCan coefficients for transplants/imports as well, ranging from + .15 to + .53; 5 of 14 are statistically significant. Even the analysis of transplant models only, based on substantially fewer data points, produces uniformly positive coefficients.

If the coefficients for passenger cars are higher than in the all-vehicles analyses, it can only be that the coefficients for light trucks are lower or even negative. Table 3-5, a set of regressions for **light truck** MMGs only, shows a lot of negative Δ_USCan coefficients, some of which are statistically significant. These regressions include the Vehicle Type variable, and it has three possible values: pickup, SUV or van. The first 14 regressions in Table 3-5 include all light truck MMGs: Big 3, transplant and imported. The Δ_USCan coefficients range from - .56 to + .01 and are statistically significant in one case; however, none of the coefficients for the unchanged MMGs are statistically significant. When the analyses are limited to Big 3 light trucks, the Δ_USCan coefficients are just a shade more negative; again none of the coefficients for the unchanged MMGs are statistically significant. The coefficients for transplants and imports, on the second page of Table 3-5, are more positive than for the Big 3, ranging from - .53 to + .40; all but one of the 14 coefficients for unchanged MMGs are positive.

These mixed but often negative coefficients for light trucks are an important caveat for the results of this chapter. There does not appear to be any intuitive reason to suspect a negative effect in light trucks. The findings suggest that the various relationships between USCan content and sales, although real enough in a statistical sense, might not have that much to do with cause and effect. Among passenger cars, certain high-volume make-models that drive the regressions, specifically transplants such as Honda had increasing USCan content and sales, while other high-volume make-models, specifically Big 3 models such as General Motors, lost USCan content [to Mexico] and sales. But among light trucks, the transplants that gained USCan content did not particularly increase their sales, while some high-volume Big 3 models, especially Chrysler and General Motors lost USCan content [to Mexico] while sales boomed. If the relationship in cars were "causal" it would not likely be reversed in light trucks, but if the pattern in cars is more of a coincidence (i.e., the sales increases and decreases are essentially due to factors other than USCan content), there could more easily be the opposite pattern in trucks.

Nevertheless, the generally positive coefficients of this chapter, even though they fall short of proving that USCan content benefits sales, at least do not suggest that increasing USCan content does sales any harm.

In all the preceding regressions, the definition of Δ_USCan in 1996, 1997 and 1998 was the actual year-to-year change, while a less direct surrogate had to be used in 1995. Did the inclusion of the 1995 data points distort the regressions or push the results in one direction? Table 3-6 repeats the principal regressions of this chapter, the first two sections of Table 3-3, but using only the 317 data points from model years 1996-98, and not the 93 data points for MY 1995. The Δ_USCan

TABLE 3-5

LIGHT TRUCKS: SALES INCREASE (%) PER 1 PERCENT INCREASE IN U.S./CANADIAN CONTENT, MY 1995-98

coefficients for Δ_USCan in the regressions of Δ_Sales by Δ_USCan and other variables in 38 high-volume make-model groups
Δ_USCan = U.S./Canadian content on current MY AALA label - content on preceding MY AALA label ‡
Δ_Sales = log (current MY sales) - log (preceding MY sales)

		Limited to make-model groups with sales changes in the following ranges:						
	Sales increase (%) no more than:	Any	100	82	65	49	35	22
	Sales decrease (%) no more than:	Any	-50	-45	-39	-33	-26	-18
All make-model groups	coefficient	- .11	- .29	- .31	- .56	- .37	- .27	- .19
	t-value	- .36	- 1.30	- 1.43	- 2.80 §§	- 1.86	- 1.55	- 1.10
	N of data points	143	138	136	131	128	119	106
All unchanged make-model groups	coefficient	- .21	- .30	- .30	- .30	- .30	- .12	.01
	t-value	- .62	- .97	- 1.09	- 1.09	- 1.09	- .53	.04
	N of data points	95	93	91	90	90	84	76
Big 3 make-model groups	coefficient	- .69	- .65	- .67	- .70	- .42	- .22	- .10
	t-value	- 1.96	- 2.07 §	- 2.34 §	- 2.55 §	- 1.42	- .85	- .42
	N of data points	93	91	90	87	86	81	75
Unchanged Big 3 groups	coefficient	- .22	- .29	- .33	- .32	- .32	- .01	.04
	t-value	- .77	- .68	- .85	- .85	- .85	- .03	.15
	N of data points	67	66	65	64	64	61	57

§ coefficient is negative and statistically significant at the .05 level.
§§ coefficient is negative and statistically significant at the .01 level.
‡ in 1995, Δ_USCan = USCan(95) - 90.09 for Big 3; USCan(95) - 48.39 for transplant; USCan(95) - 4.69 for import.

TABLE 3-5 (continued)

		Limited to make-model groups with sales changes in the following ranges:						
Sales increase (%) no more than:		Any	100	82	65	49	35	22
Sales decrease (%) no more than:		Any	-50	-45	-39	-33	-26	-18
Transplant/imported groups	coefficient	- .43	- .51	- .53	- .46	- .03	- .09	.20
	t-value	- 1.37	- 1.77	- 1.87	- 1.57	- .09	- .31	.92
	N of data points	50	47	46	44	42	38	31
Unchanged transplants/imports	coefficient	.40	.20	.16	.16	.16	.07	.26
	t-value	.92	.50	.41	.41	.41	.19	.94
	N of data points	28	27	26	26	26	23	19
Transplant make-model groups	coefficient	- .41	- .41	- .41	.01	.01	- .06	.12
	t-value	- 1.19	- 1.19	- 1.19	.02	.02	- .16	.61
	N of data points	24	24	24	23	23	22	20
Unchanged transplant groups	coefficient	.03	.03	.03	.03	.03	- .02	.17
	t-value	.08	.08	.08	.08	.08	- .05	.76
	N of data points	14	14	14	14	14	13	12

TABLE 3-6

MY 1996-98 ONLY, ALL VEHICLES:
SALES INCREASE (%) PER 1 PERCENT INCREASE IN U.S./CANADIAN CONTENT

coefficients for Δ_USCan in the regressions of Δ_Sales by Δ_USCan and other variables in 116 high-volume make-model groups
Δ_USCan = U.S./Canadian content on current MY AALA label - content on preceding MY AALA label
Δ_Sales = log (current MY sales) - log (preceding MY sales)

		Limited to make-model groups with sales changes in the following ranges:						
	Sales increase (%) no more than:	Any	100	82	65	49	35	22
	Sales decrease (%) no more than:	Any	-50	-45	-39	-33	-26	-18
All make-model groups	coefficient	- .28	.04	.06	.06	.16	.29	.31
	t-value	- 1.19	.24	.35	.35	1.01	2.18*	2.58*
	N of data points	317	309	303	294	281	257	220
All unchanged make-model groups	coefficient	.30	.30	.30	.28	.31	.48	.44
	t-value	1.46	1.46	1.52	1.51	1.68	3.08**	3.28**
	N of data points	202	202	200	196	193	179	159

* coefficient is statistically significant at the .05 level.
** coefficient is statistically significant at the .01 level.

coefficients are fairly similar to those in Table 3-3, although more volatile as might be expected from using fewer data. They range from - .28 to + .48; all but one are positive. The 14 coefficients average to + .21. That is essentially identical to the + .20 average of the first 14 Δ_USCan coefficients in Table 3-3.

3.4 Relationships between USCan content and price

There is a perception - and it is supported by the survey responses of the manufacturers in Chapter 7 - that cost-efficiency is one of the motives for relocating parts factories and/or switching from outside suppliers in one country to another. Specifically, Japanese and Western European manufacturers might save money by using fewer parts from their home countries and more USCan parts at times when the USCan parts cost less. But the Big 3 might save by acquiring fewer USCan and more Mexican parts. If these cost savings were passed directly to the consumer on the make-models where they occurred, we would expect an association of USCan content and price. If such association existed, there could further be an indirect effect on sales: a change in USCan content causing lower prices in turn causing higher sales. It is important to remember, though, that cost is not the same thing as price. A manufacturer who experiences a cost-savings on a particular make-model is free to retain the savings as increased profit or to spread the savings as price reductions on other make-models if that appears to be a better market strategy. Even if USCan content is uncorrelated with retail prices it may still affect manufacturing costs.

These hypotheses can be statistically assessed by performing regressions on the data file described in Section 3.1. Δ_Price will now be the dependent variable, while Δ_USCan continues as the principal independent variable. The data will be limited to current model years 1996, 1997 and 1998: we are only interested in the effect of **actual** year-to-year changes in USCan on prices, and cannot use 1995 data, where the actual change in USCan from 1994 is unknown and Δ_USCan was a surrogate measuring, as it were, the change in USCan perceived by the consumer.

Separate analyses are needed for Big 3 vehicles and those sold by foreign-based companies, because the effects could be in opposite directions. In the Big 3, most of the limited movement in parts was presumably between the United States/Canada and Mexico, although in most cases that cannot be inferred directly from the labels, which only mention countries that contribute over 15 percent of the value of parts, or engines, or transmissions. Thus, lower USCan might result in lower costs: a positive Δ_USCan coefficient. (That expectation could, in fact, be incorrect if a substantial portion of the parts movement was to Japan or Western Europe rather than Mexico.) In the foreign-based companies, a movement of parts from Japan or Western Europe to North America might have lowered costs. If so, the higher the USCan content the lower the cost (negative coefficient). Captive imports are deleted from the Big 3 data and Korean manufacturers from the transplant/import data because they do not fit the paradigms just described.

Make-model groups that were substantially redesigned, with the same name or a new name, are excluded in the first year of their redesign/rename because they essentially became different vehicles and cannot be expected to have the same price. The other eight model-change categories, such as "last year before redesign," "second year it existed," etc. are retained because the basic vehicle is the same in the current and the previous year; however, the model-change variable is kept in the regression because these factors could affect prices for marketing reasons.

Table 3-7 documents the regression of Δ_Price by Δ_USCan and other variables for 160 Big 3 MMG data points of model years 1996-98. This model fits the data well, with overall $F = 7.94$ (14 model df, 145 error df, $p < .0001$) and R-squared = .4339. But the regression coefficient for Δ_USCan is not statistically significant ($t = -0.76$). The observed effect, -.042 is quite weak and its sign is inconsistent with the hypothesis that most of the parts movement in the Big 3 was between U.S./Canada and Mexico. It associates, for example, a 0.42 percent reduction in prices with a 10 percentage-point increase in USCan content - essentially little or no effect.

The intercept in this regression is .01957, and its interpretation is that the price inflation for unchanged passenger cars was about 2 percent in 1998. Among vehicle types, pickups and SUVs had significant positive coefficients, indicating that their prices rose faster than passenger car prices. The various model-change-related categories had little effect on price[4]. The strongest effect by far is the 5 percent price increase attributed to model year 1997 ($t = 8.62$). This primarily reflects the changeover, starting with the 1997 *Automotive News Market Data Book* from excluding to including the destination charge in the list price. Price increases were also significantly higher than average in 1996 ($t = 2.08$), but only by 1.3 percent.

Table 3-8 limits the Big 3 analysis to the 116 data points that were not in any of the model-change-related categories. The Δ_USCan coefficient is again negative, -.084, and stronger than in the preceding regression but it is still not statistically significant ($t = -1.20$) and it is still weak in practical terms. It associates a 0.84 percent reduction in prices with a 10 percentage-point increase in USCan content.

Table 3-9 shows a regression of 118 data points of foreign-based manufacturers, excluding Hyundai and Kia. Transplants and imports are both included; however, unlike the Δ_Sales regressions, the Nameplate variable is not used (because we do not assume here that a change in USCan content would have different effects on costs/prices in transplants and imports). The Δ_USCan coefficient is +.03531 and it is not statistically significant ($t = 0.48$). This is a negligible effect, and its sign is inconsistent with the hypothesis that movement from Japan or Western Europe to North America should lower costs.

The intercept is -.00071, indicating essentially zero inflation in the "baseline" year 1998, when a strong dollar presumably helped importers hold the line on prices. Prices escalated more for light trucks than cars. There was a significant price increases in 1996; however, the 1997 increase primarily reflects the inclusion of destination charges in the price computation.

[4]The two categories that might be expected to affect price - actual redesigns - are excluded from the data. The "one make-model dropped from the MMG" category has a significant negative effect because it just so happened, in this data set, that the highest-price make-models were dropped.

TABLE 3-7: REGRESSION OF Δ_PRICE BY Δ_USCan
IN ALL 1996-98 BIG 3 MAKE-MODEL GROUPS
(excluding captive imports)

Dependent variable:	Δ_PRICE (log of the ratio of current MY to preceding MY price)
Aggregation method:	by make-model group and current model year
N of observations:	160
Weighting factor:	SALES_2Y (sum of current MY and preceding MY sales)
Degrees of freedom:	14 model, 145 error
Model F value:	7.94 (p = .0001)
R-square:	.4339

REGRESSION COEFFICIENTS

Parameter	Estimate	t for H0: Parameter=0	Pr > |t|
INTERCEPT	.01957	3.88	.0002
Δ_USCAN	**- .04199**	**- 0.76**	**.4490**
VEH_TYP			
CAR	.00000	.	.
PICKUP	.01155	1.87	.0642
SUV	.01664	2.36	.0195
VAN	- .00024	- 0.03	.9732
CHG_MODL			
NO CHANGE	.00000	.	.
LAST YR BF REDES	.01564	1.54	.1262
LAST YR BF RENAM	- .00432	- 0.34	.7363
LAST YR IT EXIST	- .01234	- 0.70	.4868
ADDL NAME INTROD	- .02064	- 1.21	.2276
ONE NAME DROPPED	- .06851	- 2.37	.0189
COMPETITOR INTRO	- .02140	- 0.85	.3975
2ND YR IT EXIST	- .00918	- 0.72	.4743
2ND YR AFT REDES	- .00409	- 0.52	.6027
CURR_YR			
1996	.01253	2.08	.0388
1997	.05001	8.62	.0001
1998	.00000	.	.

TABLE 3-8: REGRESSION OF Δ_PRICE BY Δ_USCan IN UNCHANGED 1996-98 BIG 3 MAKE-MODEL GROUPS
(excluding captive imports)

Dependent variable:	Δ_PRICE (log of the ratio of current MY to preceding MY price)
Aggregation method:	by make-model group and current model year
N of observations:	116
Weighting factor:	SALES_2Y (sum of current MY and preceding MY sales)
Degrees of freedom:	6 model, 109 error
Model F value:	13.39 (p = .0001)
R-square:	.4243

REGRESSION COEFFICIENTS

Parameter	Estimate	t for H0: Parameter=0	Pr > |t|
INTERCEPT	.01903	3.50	.0007
Δ_USCAN	**- .08398**	**- 1.20**	**.2334**
VEH_TYP			
CAR	.00000	.	.
PICKUP	.00730	1.01	.3143
SUV	.00907	1.22	.2240
VAN	- .00506	- 0.60	.5501
CURR_YR			
1996	.01754	2.57	.0114
1997	.05311	8.10	.0001
1998	.00000	.	.

TABLE 3-9: REGRESSION OF Δ_PRICE BY Δ_USCan
IN ALL 1996-98 TRANSPLANT/IMPORT MAKE-MODEL GROUPS
(excluding Korean manufacturers)

Dependent variable:	Δ_PRICE (log of the ratio of current MY to preceding MY price)
Aggregation method:	by make-model group and current model year
N of observations:	118
Weighting factor:	SALES_2Y (sum of current MY and preceding MY sales)
Degrees of freedom:	13 model, 104 error
Model F value:	1.80 (p = .0523)
R-square:	.1838

REGRESSION COEFFICIENTS

Parameter	Estimate	t for H0: Parameter=0	Pr > |t|
INTERCEPT	- .00071	- 0.07	.9405
Δ_USCAN	**.03531**	**0.48**	**.6353**
VEH_TYP			
CAR	.00000	.	.
PICKUP	.03777	2.37	.0199
SUV	.02771	1.56	.1222
VAN	.02317	0.70	.4869
CHG_MODL			
NO CHANGE	.00000	.	.
LAST YR BF REDES	.00359	0.20	.8429
LAST YR BF RENAM	.00463	0.08	.9352
LAST YR IT EXIST	.05292	0.85	.3978
ADDL NAME INTROD	- .06237	- 1.27	.2057
COMPETITOR INTRO	.02905	0.43	.6711
2ND YR IT EXIST	- .03008	- 1.05	.2943
2ND YR AFT REDES	.02442	1.69	.0942
CURR_YR			
1996	.02887	2.44	.0164
1997	.03753	2.92	.0043
1998	.00000	.	.

Table 3-10 limits the analysis to the 80 data points for entirely unchanged MMGs. The Δ_USCan coefficient is a negligible +.021 and it is not statistically significant ($t = 0.28$).

Large year-to-year changes in price are much rarer than extreme sales fluctuations. Only two transplant/import data points, and no Big 3 data points had |Δ_Price| > .2. Exclusion of those two points had little effect on the results.

These analyses showed that changes in USCan content in specific make-models had no significant association with the retail prices in those make-models. As explained above, the results do not preclude the possibility that changes in USCan content affected manufacturers' costs, because cost-savings are not necessarily passed on as price reductions on the make-models where they occur.

TABLE 3-10: REGRESSION OF Δ_PRICE BY Δ_USCan
IN UNCHANGED 1996-98 TRANSPLANT/IMPORT MAKE-MODEL GROUPS
(excluding Korean manufacturers)

Dependent variable:	Δ_PRICE (log of the ratio of current MY to preceding MY price)
Aggregation method:	by make-model group and current model year
N of observations:	80
Weighting factor:	SALES_2Y (sum of current MY and preceding MY sales)
Degrees of freedom:	6 model, 73 error
Model F value:	2.72 (p = .0193)
R-square:	.1828

REGRESSION COEFFICIENTS

Parameter	Estimate	t for H0: Parameter=0	Pr > |t|
INTERCEPT	- .00090	- 0.09	.9277
Δ_USCAN	**.02104**	**0.28**	**.7803**
VEH_TYP			
CAR	.00000	.	.
PICKUP	.02779	1.73	.0880
SUV	.04274	2.08	.0414
VAN	.02488	0.74	.4596
CURR_YR			
1996	.02851	2.28	.0254
1997	.03973	2.95	.0042
1998	.00000	.	.

CHAPTER 4

IMPORT DEPENDENCE IN MOTOR VEHICLES AND PARTS COMPARED TO OTHER CONSUMER PRODUCTS, 1992-98

United States/Canadian (USCan) parts content did not rise in **absolute** terms after labels were placed on new vehicles in accordance with the American Automobile Labeling Act (AALA). Chapter 2 showed it declined from an average of 70 percent in model year 1995, the first year of the labels, to 67.6 percent in model year 1998. But in 1995-98 the strong U.S. economy and dollar must have worked to stimulate imports of all sorts of products. Maybe the growth of import dependence in motor vehicles would have been even stronger if not for the AALA labels, the U.S.-Japan Agreement on Autos and Auto Parts, and other measures. One way to evaluate the effect of these measures is to examine trends in motor vehicles and parts **relative** to 27 other selected consumer products such as appliances, clothing, etc., that are not regulated by the AALA. (Although some of those products have mandatory or optional country-of-origin labels, their labels did not come into existence or change significantly in or near 1995, the year the AALA took effect.) The analyses of this chapter show that the longer-term growth in import dependence among motor vehicles and parts from 1992 to 1998 was less than the average of the 27 other consumer industries - but in the years immediately before and after the AALA, it was about the same as in the other industries. In other words, there is little evidence that the AALA had any immediate effect on relative import dependence, although conceivably the AALA, the U.S.-Japan Agreement and other measures could have been factors in the longer-term effect.

The analyses of this chapter are based on data issued by the U.S. Department of Commerce, and they differ in a number of important ways from the information on the AALA labels and the statistics considered in Chapters 2 and 3. Above all, the percentages here are for the United States only, while AALA percentages are for the United States and Canada combined. Other differences are described in Section 4.1. The trends should only be expected to resemble, not correspond exactly, to the trends in Chapter 2.

4.1 The data base for comparing import dependence trends in various industries

The regulation that establishes labels for new vehicles in accordance with the AALA specifies detailed procedures for computing what percent of the value of the parts was manufactured in the United States or Canada[1]. In particular, the percentage shown on the label applies only to parts content and does not include assembly labor or other factors that add value to the finished

[1]*Code of Federal Regulations*, Title 49, General Printing Office, Washington, 1998, Part 583.

vehicle[2]. The percentage includes parts made in Canada as well as the United States. Directly comparable statistics are not available for other consumer industries.

On the other hand, *U.S. Industry and Trade Outlook*, published annually by McGraw-Hill and developed by the U.S. Department of Commerce and several private organizations[3], tabulates annual figures on U.S. production ("value of product shipments"), exports and imports in a large number of industries including new motor vehicles and automotive parts/accessories. The tables can be used to define import dependence as follows:

net imports = imports - exports

apparent domestic consumption = product shipments + net imports

net import dependence = (net imports / apparent domestic consumption) %

The *Outlook* statistics for motor vehicles and for parts differ in a number of important ways from the information on the AALA labels:

- AALA statistics are calculated for each individual make-model, but the *Outlook* only aggregates statistics for entire industries.
- Production statistics in the *Outlook* are for the United States only, while AALA percentages are for the United States and Canada combined. In the *Outlook*, shipments from the United States to Canada are included among exports, and from Canada to the United States, among imports.
- The *Outlook* tallies all exports as well as imports, making it possible to calculate net imports. The AALA only tells us the percentage of non-USCan parts in vehicles sold in the United States, but nothing about the percentage of USCan parts in vehicles sold outside the United States. Thus, the AALA cannot be used to tally exports, or net imports.

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[2]On July 28, 1999, NHTSA published a final rule (64 FR 40777) amending the regulation implementing the AALA. Effective June 1, 2000, assembly and labor costs incurred for the assembly of engines and transmissions are to be included in making country of origin determinations for those parts. The new rule, however, was not in effect during the 1992-98 time frame of the analyses of this chapter.

[3]*U.S. Industry & Trade Outlook '98*, McGraw-Hill, New York, 1998; *U.S. Industry & Trade Outlook '99*, McGraw-Hill, New York, 1999.

- The *Outlook* statistics for motor vehicles add the entire value of any vehicle assembled in the United States, including all transplants, to "value of product shipments" and the entire value of any vehicle assembled outside the United States to "imports." During 1995-98, the AALA considered only the value added by parts (and not by assembly labor, etc.) and estimated what proportion of the value of the parts was USCan, regardless of where the vehicle was assembled.

- The *Outlook* statistics are by calendar year while the AALA data are by model year.

- The *Outlook* statistics for motor vehicles include heavy trucks and buses as well as cars and light trucks, but the AALA only applies to cars and light trucks.

- The *Outlook* statistics for parts/accessories include aftermarket parts and accessories as well as the original parts in new vehicles, but the AALA only applies to the original parts.

In other words, neither the *Outlook* statistics for vehicles nor for parts should be expected to correspond exactly or even closely to the industry-wide totals computed from AALA data in Chapter 2, either in absolute terms or in the detailed year-to-year fluctuations. Nevertheless, there is reason to believe that the overall trends in the *Outlook* statistics will more or less mirror the trends in the AALA data. If net import dependence, as defined in the *Outlook*, were to increase substantially, say five percentage points or more, we would expect a corresponding increase in non-USCan parts in AALA labels, and vice-versa. Thus, the statistics in this chapter may be satisfactory for a heuristic, directional comparison of trends in motor vehicles and parts relative to other industries, but not for a quantitative analysis of the relative effect of the AALA.

Even though the *Outlook* statistics are not directly comparable to the AALA data, they have two advantages: (1) The *Outlook* statistics for motor vehicles and parts are directly comparable to the *Outlook* statistics for other consumer products. (2) *Outlook* statistics exist even before 1995, the first year of the AALA labels. That permits a comparison of 1995-98, when vehicles had the labels, to 1992-94, when they did not.

Whenever possible, statistics are derived from *U.S. Industry & Trade Outlook '99*, because it has final numbers from 1992 through 1996 (1997 for exports and imports) and estimates for 1997 (production) and 1998. *Outlook '98* only has forecasts for 1998, but had to be used for a few industries omitted in the 1999 book. Industries are classified by Standard Industry Classifications (SIC). "Motor Vehicles" include SIC 3711 (motor vehicles and car bodies) and 3713 (truck and bus bodies). *Outlook '99* presents the following statistics, in millions of current dollars, for U.S. production ("product data - value of shipments"), imports and exports in SIC 3711 and 3713[4]:

[4] *U.S. Industry & Trade Outlook '99*, McGraw-Hill, New York, 1999, p. 36-12.

	Production	Imports	Exports
1992	151,629	59,805	17,539
1993	168,682	67,803	18,399
1994	201,307	78,806	22,123
1995	205,644	84,042	21,522
1996	205,930	86,992	22,904
1997	217,694	92,369	24,525
1998	220,141	94,032	27,854

They are used to compute net imports, apparent U.S. consumption and percent net import dependence:

	Net Imports	Consumption	Import Dependence (%)
1992	42,266	193,895	21.80
1993	49,404	218,086	22.65
1994	56,683	257,990	21.97
1995	62,520	268,164	23.31
1996	64,088	270,018	23.73
1997	67,844	285,538	23.76
1998	66,178	286,319	23.11

These statistics show fluctuating import dependence, but an overall trend toward slightly higher import dependence in later years. Although differing on a year-to-year basis, they convey the same general impression as the overall results in Section 2.2: that U.S./Canadian content and assembly have both declined slightly in recent years, while Mexican or overseas parts and assembly increased.

The corresponding statistics for automotive parts (SIC 3465, 3592, 3647, 3691, 3694 and 3714) are as follows[5]:

	Production	Imports	Exports
1992	104,109	21,055	22,437
1993	118,293	23,461	26,064
1994	134,462	27,267	27,927
1995	143,859	28,800	29,323
1996	148,201	30,837	30,285
1997	152,647	33,093	35,150
1998	157,074	34,913	38,489

[5]*Ibid.*, p. 37-5.

	Net Imports	Consumption	Import Dependence (%)
1992	- 1,382	102,727	- 1.35
1993	- 2,603	115,690	- 2.25
1994	- 660	133,802	- 0.49
1995	- 523	143,336	- 0.36
1996	+ 552	148,753	+0.37
1997	- 2,057	150,090	- 1.37
1998	- 3,576	153,498	- 2.33

The United States was a net exporter of parts in 1992-93, had close to a zero trade balance in 1994-96 and again became a net exporter in 1997-98. The balance of trade is much more favorable for parts than for finished motor vehicles, because many parts are "exported" to Canada and Mexico where they are assembled and then "re-imported" as finished vehicles. But the long-term trend is essentially the same: no dramatic change in import dependence.

These statistics for motor vehicles and parts were then compared to 27 other important consumer products from industries not regulated by the AALA, the U.S.-Japan Agreement on Autos and Auto Parts, etc. The criteria for selecting the products included:

- Availability of statistics in *Outlook '99* or, at least, *Outlook '98*.

- They should be manufactured goods. Raw materials such as coal or cement, and services such as education or financial management are not included.

- They should be final products, sold at least in substantial part to individual consumers. Intermediate products or goods purchased almost exclusively by manufacturers or corporations, such as semiconductors, airplanes or oilfield machinery, are excluded.

- They should be large industries, with annual sales of $10 billion or more. In some cases, statistics for reasonably similar products with lower sales have been aggregated to add up to more than $10 billion, even though they were listed in separate chapters in *Outlook* (e.g., power hand tools with lawn and garden equipment).

- Products that are unsuited for large-scale export or import because people intrinsically need a local product, such as newspapers, are excluded.

The purpose of these criteria is to generate many "control groups" of products that: (1) are bought by more or less the same people who buy new motor vehicles - consumers - and who may have a similar interest in "buying American"/"buying imported" whether the product is a car, a television or a suit. (2) are not regulated by the AALA, the U.S.-Japan Agreement on Autos and Auto Parts, etc. and did not introduce or significantly reformat their country-of-origin information in or near 1995. That is not to say the control group industries lack country-or-origin information or are unregulated. On the contrary, many if not most of these products carry optional "Made in

_____" labels and the Federal Trade Commission has detailed regulations specifying under what circumstances a product may be labeled "Made in U.S.A." For textile, wool and fur products, labels have been mandatory since long before 1992 and subject to additional regulations[6]. In all the control groups, however, the labels were essentially the same in 1992-94 as in 1995-98. Thus, we will be able to investigate if the import-dependence trend in vehicles and parts diverged from the trend in the control groups after the introduction of AALA labels on vehicles in 1995.

The 27 groups of consumer products were defined as follows. Statistics are from *Outlook '99*, except groups marked with an asterisk are based on *Outlook '98*:

1. Plumbing parts - sinks, toilets, bathtubs and fixtures (SIC 3088, 3261, 3431 and 3432)
2. Lighting fixtures, lamps (SIC 3645, 3646 and 3648)*
3. Carpets and rugs (SIC 227)
4. Paper napkins, towels and tissue (SIC 2676)*
5. Drugs and pharmaceuticals (SIC 283)
6. Cosmetics, soap and detergents (SIC 284)*
7. Tires (SIC 3011)
8. Power-driven hand tools plus lawn and garden equipment (SIC 3524 and 3546)
9. Air-conditioning and heating equipment (SIC 3585)
10. Farm machinery and equipment (SIC 3523)
11. Photographic equipment and supplies (SIC 3861)
12. Book publishing (SIC 2731)
13. Greeting cards, stationery, forms, looseleafs, bank checks, etc. (SIC 2771 plus 2782)
14. Computers and peripherals (SIC 3571, 3572, 3575 and 3577)
15. Telephone apparatus [customer and company equipment] (SIC 3661)
16. Apparel (SIC 23 minus SIC 239)
17. Curtains, household cloth furnishings and other non-apparel textile products (SIC 239)
18. Leather products [shoes, luggage, purses, gloves, etc.] (SIC 2386, 314, 315, 316 and 317)
19. Alcoholic beverages (SIC 2082, 2084 and 2085)
20. Meat, poultry and dairy products (SIC 2011, 2013, 2015 and 202)*
21. Other processed foods [all processed foods except alcoholic beverages, meat, poultry and dairy products] (SIC 20 minus SIC 2011, 2013, 2015, 202, 2082, 2084 and 2085)*
22. Household audio and video equipment (SIC 3651)*
23. Household furniture (SIC 251)
24. Household appliances [cooking, refrigerators, laundry, vacuum cleaners, etc.] (SIC 363)
25. Recreational goods [sporting goods, dolls, toys, games, bicycles, motorcycles, recreational boats] plus musical instruments(SIC 3732, 3751, 3942, 3944, 3949, and 3931]
26. Jewelry [precious plus costume] (SIC 3911 plus 3961)
27. Medical instruments and supplies (SIC 384)

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[6]Senie, A.L., *Federal Laws on "MADE IN THE U.S.A." Labeling*, U.S. Department of Commerce, www.tradecompass.com/library/legal/fedus.htm. *Complying with the Made In the USA Standard*, Federal Trade Commission, www.ftc.gov/bcp/conline/pubs/buspubs/madeusa.htm. *Part 303 – Rules and Regulations under the Textile Fiber Products Identification Act (Footnote)*, Arent Fox, www.webcom.com/%7Elewrose/trr/textile.html.

4.2 Basic statistics and trends, 1992-98

Table 4-1 shows the apparent U.S. consumption, production (value of product shipments), imports, exports and import dependence for each of these industries in calendar year 1998, and compares them to motor vehicles and parts. The size of these industries, as measured by apparent consumption, ranges from just under $10 billion (plumbing parts; cards and stationery) to $267 billion for "other processed foods," almost as large as motor vehicles ($286 billion). However, the sum of the 27 control groups, $1.256 trillion, far exceeds spending on motor vehicles.

Import dependence ranges from -11.87 percent for medical and dental instruments to 79.97 percent for leather goods. Net import dependence for the 27 control groups together is 11.55 percent. Thus, finished motor vehicles are higher than average, at 23.11 percent, while parts and accessories are lower than average, at -2.33 percent.

Manufactured products fall into four categories of import dependence. The United States is a major net exporter of air conditioners and medical/dental instruments (also aircraft, but they are excluded here since little of the product is purchased by individual consumers). Many products, including automotive parts, have net import dependence in the positive or negative single digits, indicating net self-sufficiency. Quite a few important industries, such as computers, furniture and appliances have moderate import dependence (14-26%), resembling finished motor vehicles. The United States is a heavy net importer of apparel, leather goods, audio and video, recreational goods and jewelry.

Table 4-2 ranks motor vehicles, auto parts and the 27 control group products from lowest to highest percent import dependence in each of the years 1992 to 1998. The industries are listed in the order of their 1992 ranking. Most industries stayed at about the same rank throughout 1992-98. Air conditioners and medical instruments had the two lowest rates of net imports (highest percent net exports) in each year. Recreational goods, jewelry, apparel, audio/video and leather products had the highest import dependence in all years. A few industries had major growth in import dependence during 1992-98: drugs (dropped from 9th to 16th), hand tools and garden equipment (4th to 10th), computers (19th to 24th), book publishing (3rd to 7th) and furniture (16th to 20th). Only telephone apparatus (18th to 12th) and farm machinery (8th to 4th) gained self-sufficiency by four or more ranks. Motor vehicles and parts were neither big gainers nor losers, but did slightly better than average: motor vehicles improved from 24th to 23rd and parts from 10th to 8th.

During 1992-98, import dependence for the composite of 27 control group industries gradually increased from 7.34 to 11.55 percent, while it increased a bit less in motor vehicles, 21.80 to 23.11 percent, and it decreased in parts from -1.35 to -2.33 percent (net exports increased):

TABLE 4-1: 1998 STATISTICS FOR 29 INDUSTRIES (in millions of Dollars)

	Product	Apparent Consumption	Production	Imports	Exports	Import Dependence (%)
1	Plumbing parts	9,165	8,685	780	300	5.24
2	Light fixtures	10,713	8,909	2,515	711	16.84
3	Carpets & rugs	11,350	11,210	950	810	1.23
4	Paper napkins, towels, tissue	17,543	18,183	429	1,069	- 3.65
5	Drugs	89,937	83,788	18,263	12,114	6.84
6	Cosmetics, soap, detergents	47,229	49,651	2,511	4,933	- 5.13
7	Tires	15,574	14,571	3,454	2,451	6.44
8	Hand tools & garden eqpt	10,289	10,302	1,772	1,785	- 0.13
9	A/C & heating eqpt	22,604	25,198	2,857	5,451	-11.48
10	Farm machinery & eqpt	14,411	15,028	3,772	4,389	- 4.28
11	Photo eqpt & supplies	24,750	20,000	9,600	4,850	19.19
12	Book publishing	19,800	20,475	1,365	2,040	- 3.41
13	Cards & stationery	8,601	8,324	513	236	3.22
14	Computers & peripherals	136,700	101,500	79,300	44,100	25.75
15	Telephone apparatus	34,467	33,767	8,650	7,950	2.03
16	Apparel	96,307	52,679	51,883	8,255	45.30
17	Curtains, household cloth prods	26,660	22,930	4,925	1,195	13.99
18	Leather products	21,332	4,272	17,875	815	79.97
19	Alcoholic beverages	32,504	27,909	6,005	1,410	14.14
20	Meat & dairy products	157,985	164,303	4,214	10,532	- 4.00
21	Other processed foods	267,079	268,615	19,209	20,745	- 0.58
22	Household audio & video	25,189	9,571	19,788	4,170	62.00
23	Household furniture	32,966	27,591	7,058	1,683	16.30
24	Household appliances	24,480	20,492	7,138	3,150	16.29
25	Recreational goods	40,228	23,433	22,519	5,724	41.75
26	Jewelry	10,160	5,785	4,920	545	43.06
27	Medical/dental instruments	48,340	54,080	7,010	12,750	-11.87
	ALL OF THE ABOVE	1,256,363	1,111,251	309,275	164,163	11.55
	Finished motor vehicles	286,319	220,141	94,032	27,854	23.11
	Auto parts & accessories	153,498	157,074	34,913	38,489	-2.33

TABLE 4-2: 29 INDUSTRIES RANKED FROM LOWEST TO HIGHEST IMPORT DEPENDENCE, 1992-98

Product	1992	1993	1994	1995	1996	1997	1998
A/C & heating eqpt	1	1	2	2	2	2	2
Medical/dental instruments	2	2	1	1	1	1	1
Book publishing	3	3	3	5	6	6	7
Hand tools & garden eqpt	4	4	5	6	9	9	10
Cosmetics, soap, detergents	5	5	4	3	4	4	3
Paper napkins, towels, tissue	6	7	6	7	7	7	6
Meat & dairy products	7	9	7	4	5	5	5
Farm machinery & eqpt	8	6	13	10	3	3	4
Drugs	9	10	8	11	13	14	16
Auto parts & accessories	**10**	**8**	**10**	**9**	**10**	**8**	**8**
Other processed foods	11	11	9	8	8	10	9
Carpets & rugs	12	12	11	12	11	11	11
Plumbing parts	13	13	14	15	15	15	14
Cards & stationery	14	14	12	13	14	13	13
Tires	15	16	16	16	16	16	15
Household furniture	16	17	18	20	20	20	20
Curtains, household cloth prods	17	19	20	18	17	18	17
Telephone apparatus	18	15	15	14	12	12	12
Computers & peripherals	19	23	23	23	23	23	24
Alcoholic beverages	20	18	17	17	18	19	18
Light fixtures	21	21	21	21	21	21	21
Household appliances	22	20	19	19	19	17	19
Photo eqpt & supplies	23	22	22	22	22	22	22
Finished motor vehicles	**24**	**24**	**24**	**24**	**24**	**24**	**23**
Recreational goods	25	25	25	25	25	25	25
Jewelry	26	27	27	27	27	26	26
Apparel	27	26	26	26	26	27	27
Household audio & video	28	28	28	28	28	28	28
Leather products	29	29	29	29	29	29	29

Net Import Dependence (%)

	Motor Vehicles	Automotive Parts	27 Other Industries
1992	21.80	- 1.35	7.34
1993	22.65	- 2.25	7.99
1994	21.97	- 0.49	8.79
1995	23.31	- 0.36	8.98
1996	23.73	+0.37	9.03
1997	23.76	- 1.37	10.03
1998	23.11	- 2.33	11.55

4.3 Before vs. after the AALA labels: 1992-94 vs. 1995-98

Potentially the best single indicator of the possible impact of AALA labels and the U.S.-Japan Agreement on Autos and Auto Parts is to compare import dependence for 1995-98, when motor vehicles had the labels and the Agreement was in effect[7], to 1992-94, the "before" period. If any of these measures made a really big difference in the marketplace, we would expect to see a change in import dependence for 1995-98 vs. 1992-94, perhaps not in absolute terms, but certainly relative to the 27 control group industries unaffected by the AALA labels (subject to the caveat that the import-dependence statistics in this chapter do not correspond exactly to the USCan parts information on the labels). In other words, we have a 2x2 experimental design where AALA labels and the Agreement are the "treatment" received only by the automotive industries in 1995-98:

	1992-94	1995-98
Automotive industries		
Control group industries		

Table 4-3 ranks motor vehicles, parts and 27 control group industries from lowest to highest import dependence in 1992-94 and in 1995-98. Import dependence for 1992-94 [1995-98] is computed by adding up the production, exports and imports for 1992-94 [1995-98] and, as usual, dividing net imports by apparent consumption. Based on ranks, auto parts and accessories improved slightly relative to the control group industries, from 9th place in 1992-94 to 8th place in 1995-98. Finished motor vehicles ranked 24th in both time periods. There was no dramatic shift away from import dependence (like farm machinery, that changed from 11th to 3rd) or towards it (like drugs, moving from 8th to 14th).

[7]The Agreement was signed on June 28, 1995 (see Section 1.3).

TABLE 4-3

29 INDUSTRIES RANKED FROM LOWEST TO HIGHEST IMPORT DEPENDENCE BEFORE AALA (1992-94) VS. AFTER AALA (1995-98)

	Import Dependence				
	1992-94		1995-98		
Product	Rank	%	Rank	%	Change
Medical/dental instruments	1	-9.65	1	-12.28	-2.63
A/C & heating eqpt	2	-9.39	2	-10.10	-0.71
Book publishing	3	-4.43	6	-3.20	1.24
Hand tools & garden eqpt	4	-3.91	9	-0.82	3.09
Cosmetics, soap, detergents	5	-3.52	4	-4.62	-1.11
Paper napkins, towels, tissue	6	-2.85	7	-3.03	-0.18
Meat & dairy products	7	-2.38	5	-3.93	-1.56
Drugs	8	-1.34	14	3.95	5.29
Auto parts & accessories	**9**	**-1.32**	**8**	**-0.94**	**0.38**
Other processed foods	10	-0.77	10	-0.49	0.29
Farm machinery & eqpt	11	-0.09	3	-5.10	-5.01
Carpets & rugs	12	0.09	11	1.37	1.28
Plumbing parts	13	2.94	15	5.07	2.14
Cards & stationery	14	2.97	13	3.09	0.12
Telephone apparatus	15	8.26	12	2.78	-5.48
Tires	16	9.18	16	7.02	-2.16
Household furniture	17	9.68	20	13.95	4.28
Alcoholic beverages	18	9.95	17	11.81	1.86
Curtains, household cloth prods	19	10.00	18	11.95	1.95
Household appliances	20	10.50	19	12.77	2.26
Light fixtures	21	11.52	21	15.32	3.80
Photo eqpt & supplies	22	14.58	22	18.30	3.73
Computers & peripherals	23	15.90	23	22.60	6.70
Finished motor vehicles	**24**	**22.14**	**24**	**23.48**	**1.34**
Recreational goods	25	31.65	25	36.79	5.13
Apparel	26	35.19	27	41.16	5.97
Jewelry	27	36.07	26	40.15	4.08
Household audio & video	28	58.67	28	60.29	1.62
Leather products	29	68.92	29	76.32	7.40
ALL EXCEPT AUTOS & PARTS		8.07		9.95	1.88

The right column of Table 4-3 indicates the change in import dependence: the arithmetic difference between the percent import dependence in 1995-98 and 1992-94. For auto parts and accessories, import dependence increased by 0.38 percent; for finished motor vehicles, by 1.34 percent. Both of these are slightly better, but not really very different from the 1.88 percent increase in the combined 27 control group industries. These numbers do not suggest a large impact for the AALA "treatment" when import dependence is measured relative to other industries "untreated" with the AALA/Agreement.

Table 4-4 ranks the 29 industries by their **change** in import dependence from 1992-94 to 1995-98 (the right column of Table 4-3). Eight products, ranging from telephone apparatus to paper napkins, towels and tissue, were able to reduce import dependence (or increase relative net exports) from 1992-94 to 1995-98. Five industries, ranging from recreational goods to leather products, slid 5 percent or more toward greater import dependence. Auto parts and finished motor vehicles are in neither extreme group. Instead, they are both close to the median of the 29 industries, parts ranking 11th and finished motor vehicles ranking 14th. They behaved like the "typical" industries unaffected by the AALA/Agreement.

4.4 Short-term change: just before AALA (1994) vs. just after AALA(1995)

Theoretically, the effect of the AALA, if there is any, could take place immediately, in 1995, or it could lag (if consumers are not initially aware of the labels) or even lead (if manufacturers move operations to North America in anticipation of the labels). It could be a one-time effect, or gradual and cumulative. But certainly one change we might look for is 1994 vs. 1995. We already saw in Section 2.2 that there was no dramatic shift, in absolute terms, from overseas to U.S./Canadian assembly between 1994 and 1995. Table 4-5 explores the short-term effect relative to other industries. It ranks the 29 consumer products based on the change in import dependence from 1994 to 1995.

There was no major shift in the direction of trade from 1994 to 1995. Only farm machinery, telephone apparatus and leather products changed import dependence by more than 2 percent in either direction. The 27 control group products, as a whole, increased import dependence by 0.19 percent. Auto parts were almost exactly at the median, increasing by 0.13 percent. Finished motor vehicles, on the other hand, had the 4th largest increase of import dependence among the 29 industries. Still, this increase, 1.34 percent, is only slightly larger than the median for the 29 products. In any case, Table 4-5 confirms that the AALA was not followed by an immediate reduction of import dependence for automotive products, relative to the rest of the economy.

4.5 Longer-term change: 1992 vs. 1998

A better way to study the possible longer-term, cumulative effects of the AALA, the U.S.-Japan Agreement on Autos and Auto Parts and other measures that have affected the international auto industry is to study import dependence in two widely separated years. Table 4-6 compares the automotive industry to other products over a longer period of time by ranking the 29 industries on the change in import dependence from the single year 1992 to the single year 1998. Nine

TABLE 4-4

29 INDUSTRIES RANKED BY CHANGE IN IMPORT DEPENDENCE
BEFORE AALA (1992-94) VS. AFTER AALA (1995-98)

	Change in Import Dependence		Import Dependence (%)	
Product	Rank	%	1992-94	1995-98
Telephone apparatus	1	-5.48	8.26	2.78
Farm machinery & eqpt	2	-5.01	-0.09	-5.10
Medical/dental instruments	3	-2.63	-9.65	-12.28
Tires	4	-2.16	9.18	7.02
Meat & dairy products	5	-1.56	-2.38	-3.93
Cosmetics, soap, detergents	6	-1.11	-3.52	-4.62
A/C & heating eqpt	7	-0.71	-9.39	-10.10
Paper napkins, towels, tissue	8	-0.18	-2.85	-3.03
Cards & stationery	9	0.12	2.97	3.09
Other processed foods	10	0.29	-0.77	-0.49
Auto parts & accessories	**11**	**0.38**	**-1.32**	**-0.94**
Book publishing	12	1.24	-4.43	-3.20
Carpets & rugs	13	1.28	0.09	1.37
Finished motor vehicles	**14**	**1.34**	**22.14**	**23.48**
Household audio & video	15	1.62	58.67	60.29
Alcoholic beverages	16	1.86	9.95	11.81
ALL EXCEPT AUTOS AND PARTS		1.88	8.07	9.95
Curtains, household cloth prods	17	1.95	10.00	11.95
Plumbing parts	18	2.14	2.94	5.07
Household appliances	19	2.26	10.50	12.77
Hand tools & garden eqpt	20	3.09	-3.91	-0.82
Photo eqpt & supplies	21	3.73	14.58	18.30
Light fixtures	22	3.80	11.52	15.32
Jewelry	23	4.08	36.07	40.15
Household furniture	24	4.28	9.68	13.95
Recreational goods	25	5.13	31.65	36.79
Drugs	26	5.29	-1.34	3.95
Apparel	27	5.97	35.19	41.16
Computers & peripherals	28	6.70	15.90	22.60
Leather products	29	7.40	68.92	76.32

TABLE 4-5

29 INDUSTRIES RANKED BY CHANGE IN IMPORT DEPENDENCE
JUST BEFORE AALA (1994) VS. JUST AFTER AALA (1995)

	Change in Import Dependence		Import Dependence (%)	
Product	Rank	%	1994	1995
Farm machinery & eqpt	1	-3.88	3.64	-0.24
Telephone apparatus	2	-3.88	7.86	3.99
Tires	3	-1.54	9.73	8.18
Meat & dairy products	4	-1.13	-2.85	-3.98
Medical/dental instruments	5	-1.01	-10.95	-11.96
A/C & heating eqpt	6	-0.77	-8.20	-8.97
Alcoholic beverages	7	-0.14	9.96	9.82
Cards & stationery	8	-0.13	3.29	3.16
Other processed foods	9	-0.12	-0.73	-0.85
Cosmetics, soap, detergents	10	0.03	-4.08	-4.04
Jewelry	11	0.09	37.93	38.02
Curtains, household cloth prods	12	0.10	10.87	10.97
Auto parts & accessories	**13**	**0.13**	**-0.49**	**-0.36**
ALL EXCEPT AUTOS AND PARTS		0.19	8.79	8.98
Plumbing parts	14	0.43	4.08	4.51
Recreational goods	15	0.46	31.37	31.83
Household appliances	16	0.53	10.58	11.10
Paper napkins, towels, tissue	17	0.62	-3.17	-2.55
Computers & peripherals	18	0.67	19.76	20.43
Book publishing	19	0.77	-4.11	-3.34
Light fixtures	20	0.84	12.36	13.20
Hand tools & garden eqpt	21	0.90	-3.59	-2.68
Household furniture	22	1.25	10.49	11.73
Household audio & video	23	1.31	60.15	61.46
Carpets & rugs	24	1.31	0.68	1.99
Apparel	25	1.32	36.25	37.57
Finished motor vehicles	**26**	**1.34**	**21.97**	**23.31**
Drugs	27	1.70	-0.89	0.81
Photo eqpt & supplies	28	1.91	16.51	18.42
Leather products	29	2.66	70.09	72.75

TABLE 4-6

29 INDUSTRIES RANKED BY LONG-TERM CHANGE IN IMPORT DEPENDENCE
1992 VS. 1998

	Change in Import Dependence		Import Dependence (%)	
Product	Rank	%	1992	1998
Telephone apparatus	1	-7.34	9.37	2.03
Medical/dental instruments	2	-2.82	-9.06	-11.87
Farm machinery & eqpt	3	-2.53	-1.75	-4.28
Tires	4	-2.18	8.62	6.44
Cosmetics, soap, detergents	5	-1.98	-3.15	-5.13
Meat & dairy products	6	-1.83	-2.17	-4.00
A/C & heating eqpt	7	-1.36	-10.12	-11.48
Paper napkins, towels, tissue	8	-1.16	-2.48	-3.65
Auto parts & accessories	**9**	**-0.98**	**-1.35**	**-2.33**
Other processed foods	10	0.17	-0.75	-0.58
Cards & stationery	11	0.47	2.75	3.22
Carpets & rugs	12	1.29	-0.05	1.23
Finished motor vehicles	**13**	**1.31**	**21.80**	**23.11**
Book publishing	14	1.45	-4.86	-3.41
Plumbing parts	15	3.53	1.71	5.24
Alcoholic beverages	16	3.97	10.17	14.14
Hand tools & garden eqpt	17	4.20	-4.32	-0.13
ALL EXCEPT AUTOS AND PARTS		4.21	7.34	11.55
Household audio & video	18	4.21	57.80	62.00
Curtains, household cloth prods	19	4.84	9.15	13.99
Household appliances	20	5.58	10.72	16.29
Light fixtures	21	6.51	10.33	16.84
Photo eqpt & supplies	22	6.90	12.29	19.19
Household furniture	23	7.51	8.79	16.30
Drugs	24	8.20	-1.36	6.84
Jewelry	25	9.49	33.57	43.06
Recreational goods	26	10.25	31.50	41.75
Apparel	27	11.24	34.06	45.30
Leather products	28	12.45	67.52	79.97
Computers & peripherals	29	16.12	9.63	25.75

industries, including auto parts were able to reduce import dependence (or increase net exports) from 1992 to 1998. But most industries became more import-dependent, including four that increased by more than 10 percent. For the 27 control group industries as a whole, import dependence increased by 4.21 percent. Finished motor vehicles did somewhat better than the median, with just a 1.31 percent increase; auto parts, substantially better, with a 0.98 percent reduction.

These statistics suggest that the auto industry had less increase in import dependence during the 1990's than other consumer goods, possibly in response to the combination of measures that have been applied over the years. Foreign-based auto manufacturers transplanted many parts and assembly operations to the United States or Canada, more so than in other industries. Thus, motor vehicles and parts were able to offset, at least to some extent, the economy-wide trend of sourcing in Mexico or other countries with lower manufacturing costs. Of course, from these statistics alone, it is impossible to tease out from the various other measures the specific contribution, if any, of the AALA labels.

CHAPTER 5

SURVEY BACKGROUND AND METHODS

To determine the extent of knowledge and use of the labels by consumers, manufacturers, and dealers, NHTSA commissioned the conduct of three surveys. All three surveys came under a single study, known as "Surveys of Consumer Information on the Domestic Content of New Cars and Light Trucks." It targeted these three groups for new passenger motor vehicles:
1) consumers, who recently bought or planned to buy a passenger motor vehicle;
2) manufacturers, including the Big 3 and foreign-based manufacturers; and 3) dealers, of Big 3 and foreign-based vehicles in the United States. Computer Assisted Telephone Interviewing (CATI) was used to conduct the consumer survey. Vehicle manufacturers and dealers were surveyed by mail. The surveys were performed by Chilton Research, a NHTSA contractor, in mid-1998.

This chapter describes the objectives of the consumer, manufacturer, and dealer surveys, the characteristics of the respondent groups, the survey instruments, the methodologies, the pre-tests, and the data collection procedures.

5.1 Objectives of the data collection

Consumer survey: Determine the extent to which potential and actual purchasers of new passenger cars, pickup trucks, vans, and sport utility vehicles think the national origin of the vehicle and its parts are important *vis a vis* other factors in selecting a vehicle; are knowledgeable about the origin of their own and other vehicles; know that the content label exists and have seen or read it; correctly interpret the information on the label and find it easy to follow; and take this information into account in their purchase decision making.

Manufacturer survey: Inquire about the effects of this regulation on manufacturers of these vehicles in terms of cost, manufacturing changes, parts sourcing and sales.

Dealer survey: Determine the extent to which dealers of passenger cars, pickup trucks, vans, and SUVs understand the content labels, and provide this new information to potential and actual customers, and find it useful or detrimental in marketing.

5.2 Preparatory steps

Pursuant to 5 CFR 1320.8(d), NHTSA issued a notice soliciting public comments on the proposed data collection in the *Federal Register* on Thursday, July 24, 1997 (62 FR 39886). A copy of this notice appears in Appendix C. NHTSA received one public comment in response to this notice, from the National Automobile Dealers Association (NADA), requesting that the surveys be made shorter and less time-consuming. In response, the surveys were extensively streamlined.

This data collection effort was conducted in accordance with all relevant Federal regulations and requirements, including the Privacy Act of 1974 (5 USC 552a), the Privacy Act Regulations (34 CFR Part 5b), the Freedom of Information Act (5 USC 522), and related regulations (41 CFR Part 1-1, 45 CFR Part 5b, and 40 CFR 44502). Manufacturers who wished to submit information under a claim of confidentiality did so in accordance with 49 CFR Part 512, NHTSA's regulation concerning Confidential Business Information.

5.3 Consumer survey

Statistical methodology for stratification and sample selection: The consumer survey used a national probability sample, with a county-based stratification scheme in which telephone households are assigned to 20 sampling strata. It used a Random Digit Dialing (RDD) sample frame that includes a current file of approximately 40,000 telephone exchanges, each of which is coded for membership in a county, state, Metropolitan Statistical Area, and census region. For every county in the U.S., the total number of households, African-American households, Hispanic/Latino households, and median income has been recorded. The 20 sampling strata are defined using a two-way cross-classification of regional and metropolitan characteristics.

The study used a three-stage sampling process: (a) Sample telephone exchanges. (b) Sample households. (c) Select qualified respondents within households: people who had purchased/leased new vehicle in past six months or were planning to purchase/lease a new vehicle in the next three months.

In order to provide the ability to produce unbiased estimates at the regional and metropolitan/non-metropolitan levels, the contractor employed a national sample of telephone households stratified into 20 distinct and independent sampling strata. The 20 sampling strata are defined using a two-way cross-classification of regional and metropolitan characteristics. First, all states and counties are assigned to one of the ten regional strata as defined by the United States Bureau of the Census. Within the nine regions other than New England, counties are assigned to a metropolitan stratum if they are part of a Metropolitan Statistical Area (MSA) currently recognized by the Office of Management and Budget, and to a nonmetropolitan stratum, otherwise. In New England, the definition employed is that adopted in 1975 by OMB, wherein New England County Metropolitan Areas (NECMA's) were defined, replacing the MSA definition based on towns and townships.

The sampling procedures used provide an unbiased representative sample of virtually all telephone households including an unbiased sample of unlisted or unpublished residential numbers in their correct proportions. The sample selection process, at all stages, was based on the strict application of accepted sampling procedures and variance reduction methods.

It was expected that between 6 percent and 8 percent of households would have a qualified respondent.

Estimation procedure: Data were weighted to population characteristics for all U.S. households. These characteristics include number of adults living in the household, region, household income, and characteristics of head of household. During the interviewing, this information was collected from all respondents completing the interview, and approximately 10 percent of the respondents who did not qualify for the survey. In this way, information was gathered about how closely the total screened sample represents U.S. households. Data on U.S. household demographic distributions throughout the nation were obtained from the Current Population Survey (CPS). All data were weighted, including screens, by the household characteristics. To correct for any over- or under-sampling by demographic groups a sample balancing technique called Raking Ratio Estimation, or iterative proportional fitting, was used.

Raking Ratio Estimation helps control the weight variation and allows control on numerous demographic groups without requiring a separate control count for each cell in the cross-classification of the demographic groups. Raking adjusts the sample counts to conform to one marginal distribution, such as household income, and then adjusts again to another marginal distribution, such as region. This continues for the marginal distributions for all characteristics used in the weighting scheme. Each adjustment throws off the accuracy of the previous adjustments so the procedure is repeated in an iterative fashion until there is close conformity for all the marginal distributions.

This procedure resulted in every case (completed purchaser or planner interview) being assigned a weight factor. All of the analyses in Chapter 6 are based on weighted data. However, most of the case weights are close to 1, because the contractor's RDD procedure produces samples that are already quite nationally representative and need only a slight adjustment. The "design effect" of using the weighted data was only 1.04 - i.e., both the point estimates and the variances with weighted data are for all practical purposes the same as they would have been with unweighted data.

Degree of accuracy: The sampling procedures were designed to achieve samples of 385 purchasers and 385 planners, and these would allow a margin of error of ±5 percent at the 95 percent confidence level for purchasers and planners, separately. In other words, a yes/no question (1 = yes, 0 = no) with a mean of .5 will have a sample standard deviation of .0255 for the planners, and also for the purchasers (95 percent confidence level = 1.96 standard deviations). The combined sample of planners and purchasers was originally anticipated to number 770, and the margin of error for the combined sample was expected to be ±3.5 percent at the 95 percent confidence level. The actual sample turned out to be somewhat smaller, 646 people, allowing a ±3.9 percent margin or error.

Questionnaire development and pretest: The consumer questionnaire was developed over a four-month period, beginning in June 1997, and pretested in October 1997. The survey instrument was formatted for use with an online Computer Assisted Telephone Interviewing (CATI) system. Ten interviews were completed as part of the pretest; six with purchasers and four with planners.

The average length of interview during the pretest was 10.5 minutes. None of the pretest respondents were aware of AALA, and therefore the true length of the survey could not be estimated because the series of questions about AALA was not administered. The survey was reduced in length because it exceeded the 10-minute maximum proposed by NHTSA. The modified survey was approved by the Office of Management and Budget (OMB) in August 1998.

Survey procedure: The consumer survey was conducted using Computer Assisted Telephone Interviewing. The CATI system takes a question within a questionnaire and displays it on a computer terminal. The interviewer, who is on-line via telephone with the designated respondent, reads the question from the computer screen and enters the respondent's answer directly into the computer. Skip pattern logic is programmed into the computer so the computer program controls the sequence in which questions are asked and only questions that should be asked appear on the screen. As an answer is entered by the interviewer, the program conducts on-line editing operations including coding checks which reject ineligible codes entered by the interviewer for precoded questions and validation checks of any entered data that falls outside of an acceptable range.

The CATI system also includes computer programs that control the release of sample and perform all manual controls and clerical tasks such as scheduling callbacks, adjusting for time zone differences, executing the call rule and cycling and rotating calls through various time periods.

Consumer survey data was collected over a period of 5 ½ weeks, starting in September 1998. Interviewing for the study was conducted at the contractor's Indiana, Pennsylvania, and Youngstown, Ohio facilities coordinated through the Pennsylvania headquarters. Interviewing shifts ran on weekdays between the hours of 5:30 and midnight, allowing calls to be made until 9:00 p.m. local time on the West Coast, and on weekend afternoons and evenings. Households were never contacted after 9:30 p.m. local time.

Households were screened to determine if any household member had bought or leased a new motor vehicle in the last six months or planned to buy or lease on in the next three months. For the purposes of the survey, "new" motor vehicle was defined as a Model Year 1998, 1999, or 2000 vehicle. Respondents were also instructed not to include the purchase of a used vehicle. If either of these criteria were met, the interviewer asked to speak to the person in the household most responsible for making the purchase or lease decision and conducted the interview with that person. If the primary decision-maker was not available, the interviewer asked for his/her first name and the best time to call back to reach him/her.

Interviewers attempted to complete the full interview at the time of screening. However, when necessary, interviewers offered to call back at a more convenient time to accommodate respondents' time constraints. When this occurred, interviewers recorded the date and time of the appointment in CATI. That sample piece was the delivered to an interviewer's computer terminal on the specified date and time for the call back.

One out of ten who were not eligible for participation in the study was asked a short series of demographic questions (referred to as "short completes"). Data obtained from these interviews were used to develop sample weights.

Sample control: Up to ten attempts, spread over ten separate interviewing sessions, were made to reach a respondent. These attempts varied as to the day of the week and the time of the day. After each call, interviewers recorded the disposition of the call in the CATI system. "Live" numbers that still had the potential to produce a completed interview were prioritized for future calls in the following order: 1) respondent requested a callback, 2) no answer, busy signal, answering machine, and 3) unused sample.

Telephone numbers that were consistently busy, didn't answer, or answered by a machine were called on weekday mornings and afternoons. If these numbers still remained busy or didn't answer, CATI has a device to identify if they were non-working or non-residential and stop further calls.

Refusal conversion: In order to minimize the loss of eligible respondents and to improve the overall response rate, a follow-up "refusal conversion"was made on all initial refusals (with the exception of those designated as so irate that further attempts would be fruitless).

For each initial eligible refusal, interviewers recorded in CATI the reasons for refusal (if known) and the level of hostility the respondent had when refusing. This information was then used by specially trained conversion interviewers when calling back a respondent to encourage him/her to participate in the study. Respondents who were classified as "hard" refusals by the original interviewer were not re-contacted by the refusal conversion interviewers.

Two weeks into the field period, refusal conversions efforts began. Eligible respondents who refused on first contact were taken out of the general sample and routed to refusal conversion interviewers. Fresh refusals were held for a minimum of three days before the conversion attempt was made. The refusal conversion interviewer read the comments entered into the CATI by the original interviewer to understand why the person refused before re-contacting the person.

Completed interviews: A total of 17,839 numbers were called, yielding 646 fully-completed interviews with purchasers or planners:

Full interviews completed	646	
Purchasers		425
Planners		221
Other successful contacts	6,558	
"Short complete" - demographics only		651
Terminations - not a purchaser or planner		5,892
Over quota		15
Failed contacts	839	
Refusals		813
Early terminations		26

Other calls that did not produce data	9,796	
No answer, busy, answering machine		1,288
Left message, did not call back		1,175
Head of household not available		10
Non-working number, FAX, modem, etc.		4,766
Not a household, language problems, etc.		2,557
Total numbers called	17,839	

Successful contacts were made with 7,204 households. Among the 6,543 who had not purchased a vehicle recently or planned to buy one shortly, 5,892 interviews were terminated and 651 were asked only demographic questions for sampling purposes ("short completes"). The ratio of full interviews to successful contacts, 646/7,204 = 9 percent, is slightly higher than the 6-8 percent anticipated in the sample design. Only 813 people still refused to participate after the various refusal-conversion strategies and 26 terminated the interview early: a gratifyingly small number relative to the 7,204 successful contacts. Not surprisingly, 9,796 calls produced no data because they were left unanswered, were non-working numbers, FAX machines, etc.

Quality control: The contractor implemented quality control procedures for telephone supervisors and monitors, including:

- Routine monitoring of interviews to ensure proper administration of the questionnaire. When necessary, supervisors re-briefed interviewers on segments of the interview that indicated weaknesses.

- "Listen-In" validation. Supervisors used visual and audio monitoring of interviews to validate that responses were entered correctly into the CATI system by the interviewer. Approximately 10 percent of every interviewer's work was validated.

- Supervisor reports - a standard form was used to keep a daily record of study progress and document problems. The report included the number of completed interviews, number of interviewing hours, completion rate, average length of interview, sample status, results of monitoring sessions and any problems encountered.

In addition to conducting the initial training, the Project Director monitored telephone interviews throughout the data collection to ensure the quality of the data collected. Additional briefings and clarification of interviewing procedures were provided by the Project Director as needed.

Coding: When questions required content analysis, interviewers typed the respondent's answer directly into the computer. Following each interview, the interviewer reviews the open-ended responses, correcting any typographical errors. At the end of each interviewing day, the interviews are retrieved by the Coding Department for code development.

Trained coders reviewed the verbatim responses from the first 190 completed interviews (30 percent of the completes required for this project). Individual codes were constructed for any statement mentioned approximately 3 or more times. This list of preliminary codes was used to code the first 450 interviews (70 percent of the completes required for this project). After 70 percent were coded, all mentions that did not fit into one of the existing codes were reviewed. From these, individual codes were created for any statement that was mentioned 3 or more times. These newly created codes were added to the original list, and these are the codes that were applied to the remaining interviews. All mentions that did not fit into one of the existing codes were given a "miscellaneous" or "other" code.

Data processing: After interviewing and data maintenance, data were passed through a cleaning program to ensure that all data are correct. The cleaning program is a generalized software, parameter-driven instrument that edits and checks the machine-readable records for data inconsistencies. The cleaning parameters included the following kinds of questionnaire edits:

1.6 Edits for Missing Records. The program edits for missing records by checking the sequential identification number for any missing numbers. After the entire file is passed, the program prints the identification numbers that are missing from the file. The listing is referred to as the validation list.

1.7 Edits for Proper Skip Patterns. Each field was edited for the presence or absence of data. For example, if the data fields for questions two, three and four are contingent on having a "yes" response to question one, then the fields of questions 2-4 must have data present if question one is "yes." Conversely, the fields of questions 2-4 must have a missing data code if question one is other than a "yes." If the above condition is not met, the program lists the identification number, field of error, and error type on the validation list.

1.8 Edits for Eligible Codes. The program edits each data field for eligible codes. If an ineligible code appears, the program lists the identification number, field and ineligible code on the validation list.

1.9 Edits for Number Quantities. Numeric limits may be predetermined to check on the ranges of quantity type answers. This edit is extremely helpful in sorting out responses that seem suspicious. Responses which fall outside of these limits are printed on the validation list.

If the validation listings indicated that there were missing records, ineligible codes, improper skip patterns, or value ranges which have been exceeded, the questionnaire bearing these errors was retrieved for a review of discrepancies. When needed, an interviewer made callbacks to retrieve any missing information or clear up any discrepancies.

Survey instrument: The instrument contained five introductory questions, 33 purchasing-related questions, and 17 demographic questions. The survey took approximately 10 minutes to administer. The survey was constructed with skip pattern logic programmed into the computer which controls the sequence in which the questions are asked. The complete survey instrument may be found in Appendix D. Here is an overview of the questions for recent planners and purchasers:

Introductory questions: Did you purchase or lease a new vehicle in the past six months? Are you planning to purchase or lease one in the next three months? May I speak with the household resident responsible for making the purchase decision?

Values: Here is a list of factors people consider in selecting a new vehicle - which of them do you consider important? How important (rate them)? Which is most important? Is it important to know the country of origin of a vehicle's parts; what percentage was made in various countries; where the vehicle was assembled? How often do you make a point to "Buy American" for vehicles or other items?

Knowledge of vehicle origin: What make-model(s) did you buy or are you planning to buy? In what country was your new vehicle(s) assembled? I will now name seven popular make-models: in what countries are they assembled?

Knowledge of the existence of the AALA label: How would you find out in what country a vehicle was assembled? Have you heard of the law requiring manufacturers to place label showing country of origin for vehicles and parts? Have you heard of the parts content label? Have you seen it? Have you read it?

Understanding of the AALA label (for people who have seen or read it): What do the numbers on the parts content label mean? Do you understand it includes parts made in U.S. or Canada, but not Mexico or other countries? Do you understand it does not include assembly labor? Does the label list transplants as "assembled in US/Canada" or elsewhere? Is the information on the label easy to understand?

Influence of label: Did the information on the label influence your purchase decision? If so, how? Did a salesperson point out or explain the parts content label? Did salesperson make the label an important part of the sales presentation? Now that we've talked about the label, do you think it would influence your future purchase decisions?

Demographic questions: Age, gender, education, race/ethnicity, occupation of head of household/respondent; household size and income [geographical region and urban/rural are known from the telephone area code and exchange]

5.4 Manufacturer survey

NHTSA surveyed by mail all 21 Big 3 and foreign-based manufacturers that sell passenger vehicles in the United States. The Association of International Automobile Manufacturers (AIAM) assisted by providing a list of the names and key contacts for all foreign-based manufacturers. All 21 manufacturers mailed in a questionnaire. Since NHTSA conducted a census of the entire manufacturing population, there is no issue of error estimation.

<u>Questionnaire development, pretest and data collection</u>: The manufacturer questionnaire was developed over a four-month period, beginning in June 1997. The contractor worked with NHTSA to identify the survey topics and select questions for the draft survey instrument. Draft

questionnaires were reviewed by the American Automobile Manufacturers Association (AAMA), American International Automobile Manufacturers (AIAM) and John McElroy, Editor in Chief of Automotive Industries magazine and modified in response to their comments.

The survey was pretested by one Big 3 and one foreign-based manufacturer in October-November 1997. Based on the pretest, the survey was modified slightly and then submitted to and approved by OMB. Since the final questionnaire was quite similar to the pretest, the two pretest completes were used for the actual study so those two manufacturers would not have to complete another questionnaire.

The survey instrument was printed on DOT letterhead and mailed to the remaining 19 manufacturers in August 1998, addressed to each manufacturer's government liaison. All of them mailed in their questionnaire. Four manufacturers did not answer the questions about the cost of complying with the AALA.

The questionnaires were encoded by keypunch and 100 percent verified. The data processing included quality control procedures similar to those in the consumer survey.

Survey instrument: The complete survey instrument may be found in Appendix E. Here is an overview of the questions:

Introductory questions: Job title(s) of person(s) filling out the questionnaire

Market analysis: How important do you rate US/Canadian parts content as a factor in selling vehicles in the United States? What percentage of customers are probably aware of the existence of the parts content label?

Guidance to dealers: What guidelines or materials do you provide dealers for training staff to explain information on parts content label? Do you encourage or require dealers to make customers aware of parts content label? Do you provide dealers with any guidance or recommendations for using parts content information label as a selling point? Have you developed a consumer guide to US/Canadian parts content for dealers to give customers?

Marketing: Do you provide customers with information about US/Canadian parts content in addition to the label? How do you show this information (in-store displays, brochures, newspaper ads, magazine ads, television ads, radio ads, 800 number, etc.)? Is "Built-in -America" used in advertising strategies?

Comments on the labels: Are parts content information labels understandable to the customer? What feedback have customers, dealers, or suppliers given about the labels? Any suggestions for making the parts content information label clearer, more understandable, or more useful to consumers?

Changes in U.S./Canadian parts content or assembly: Did you significantly shift parts content or assembly during 1990-98? Were any of these shifts in content or assembly motivated by AALA?

What factors motivated you to shift product lines or component parts from imported to domestic production or vice versa? How much of a factor is the currency exchange rate relationship? By the AALA definitions, what is your estimate of the US/Canadian parts content of your Model Year 1994 vehicles?

Fleet purchasers: Have any fleet vehicle purchasers expressed an interest in the parts content information labels? Have any fleet vehicle purchasers indicated a preference for vehicles with high US/Canadian parts content?

Cost of AALA: Please estimate and explain costs to date for implementing the AALA. What were the start-up cost and number of hours? What are the annual recurring costs and hours? What is your estimate of the overall cost of this program to suppliers? How will your costs change following the end of the two-year provision allowing flexibility in estimates of content determinations where outside suppliers have not responded to requests for content information?

AALA and other record-keeping requirements (NAFTA, CAFE): How do the costs of AALA compare to the costs of gathering and reporting information on compliance with NAFTA and CAFE? Do your suppliers use a single form for reporting information required for the NAFTA, CAFE, and the AALA?

Information obtained from suppliers: Do all of your purchase orders to suppliers include a requirement to furnish US/Canadian parts content information? What percent of suppliers furnish US/Canadian parts content information?

5.5 Dealer survey

Sample design: A list comprising 90 percent of the new car dealers in the United States was acquired. A simple random sample of 500 dealers was selected and mailed questionnaires. It was expected that 200 would return them (40 percent completion rate). In fact, 195 questionnaires were returned by the end of the study.

Estimation procedure: Since the dealer survey was conducted primarily for anecdotal information, with nationally representative statistics only a secondary consideration, the data were treated as a simple random sample and no weighting or stratification was applied.

Degree of accuracy: For the actual sample of 195 dealers, the degree of accuracy is ±7.0 percent at the 95 percent confidence level. A yes/no question with a mean of .5 will have a sample standard deviation of .0358.

Questionnaire development and pretest: The dealer questionnaire was developed over a four-month period, beginning in June 1997. The draft survey instrument was reviewed by the National Dealers Association (NADA) and the American International Automobile Dealers Association (AIADA). Revisions were made based on their suggestions, greatly reducing the length of the questionnaire. A pretest was conducted from October to November 1997. The survey was mailed to a simple random sample of 50 dealers; 14 completed the survey. This was a satisfactory response rate considering there were no follow-up measures such as post-card reminders and re-mails for non-respondents. After the pretest, some parts of the survey were simplified. It was submitted to OMB and approved.

Data collection: Dealers were mailed a packet containing a questionnaire, a personalized cover letter on NHTSA stationery, and a postage-paid reply envelope. Data collection took place over a 14-week period, beginning with the first mailing to all 500 dealers in late August 1998. One week later, postcards reminding respondents to complete the survey and thanking those who already did, were mailed out to all 500 dealers. These mailings netted 107 completed surveys. In addition, five companies stated they were not new-vehicle dealers and a 13 packets were returned by the Post Office as "undeliverable." In mid-September, a second survey packet was mailed to the non-responders. By mid-October, 181 completed surveys were in hand. Telephone calls to non-respondents over a four-week period netted 14 more completions. By the close of data collection (December 11, 1998), a total of 195 completed questionnaires had been received.

Coding and data processing: The questionnaires were encoded by keypunch and 100 percent verified. The strategy for converting verbatim responses to numerical codes was similar to the one used in the consumer survey. The data processing included quality control procedures similar to those in the consumer and manufacturer surveys.

Survey instrument: The complete survey instrument may be found in Appendix F. Here is an overview of the questions:

Introductory questions: Job title(s) of person(s) filling out the questionnaire; nameplates sold; annual sales volume; size of new-vehicle sales staff

Dealer/staff knowledge of AALA: How aware are you of the AALA and the US/Canadian parts content information label? Is your sales staff aware of the parts content information labels? Do they understand the information on the labels? Can they effectively explain the labels to customers? What training are they given to explain the information on the label?

Consumer knowledge of AALA: Are customers aware of the existence of parts content information labels? Do they read the labels? Do they ask questions about them? Do they understand them? Which aspect of the label do you think customers are most interested in? Have customers expressed concern because the label combines US and Canadian content into a single percentage?

Consumer attitudes: Do customers consider US/Canadian parts content an important factor for selecting a vehicle? Do they consider the information on the label when making a purchase decision? Do they show a preference for "Buying American"/buying foreign? Are they more interested in the price of an automobile than the information on the label? Has a customer ever decided or declined to purchase a vehicle as a result of the kind of information provided on the label? How often?

Guidance received from manufacturers: Did manufacturers give you any guidelines or materials for training sales staff to explain the information on the parts content label? For using the parts content information label as a selling point?

Presentation of parts content information to customers: Under what circumstances are sales staff told to point out/explain the labels to customers? Do they make the labels an important part of sales presentations to customers? Does your franchise show parts content information through in-store displays, brochures, newspaper ads, television ads, or radio ads? How often sales staff inform customers about the final assembly point of the vehicle, the country of origin of engine or transmission parts, the percentage of US/Canadian parts that comprise the vehicle, or the major sources of non-US/Canadian parts? Are sales staff more likely to use the label in sales presentations if vehicle was assembled in the United States or outside the United States?

Suggestions: Do you have any suggestions for making the labels clearer, more understandable, or more useful to consumers?

CHAPTER 6

CONSUMER SURVEY

The objectives of the consumer information collection are to determine the extent to which potential and actual purchasers of new passenger cars, pickup trucks, vans, and sport utility vehicles (SUV) think the country of assembly of the vehicle and its U.S./Canadian parts content are important *vis a vis* other factors in selecting a vehicle; are knowledgeable about the origin of their own and other vehicles; know that the American Automobile Labeling Act (AALA) and the content label exist and have seen or read the label; correctly interpret the information on the label and find it easy to follow; and take this information into account in their purchase decision making.

Consumer survey data collection was collected over a period of 5 ½ weeks, beginning in September 1998. As explained in Section 5.3, a total of 1,297 interviews were conducted for the study; 425 interviews were conducted with purchasers of new vehicles, 221 interviews with potential purchasers (planners) and 651 interviews collecting only demographic information were conducted in households that had not purchased and did not intend to purchase a new vehicle. A total of 7,240 households were screened to obtain the sample of 646 purchasers and planners. Section 5.3 describes a procedure for weighting the cases to make sample statistics nationally representative. All statistics in this chapter, except where specified, are based on weighted cases. Appendix D presents the entire survey instrument and Section 5.3 summarizes it.

A principal finding of the survey is a disconnect between consumers' values and their knowledge and use of the AALA labels. Although many consumers think the country of assembly of vehicles and their U.S./Canadian parts content are relatively unimportant, there is a large subgroup that considers them critically important and strives to "buy American" all of the time. Yet, the vast majority of this subgroup, as well as other consumers don't know the labels exist and, as a result, could not have been influenced by them. Many purchasers of transplants were not aware that their vehicle was assembled in the U.S. or Canada, and don't necessarily think of them as "American" vehicles. Ironically, the group most likely to read the label is purchasers of vehicles assembled overseas and imported into the United States, the group that cares least about U.S./Canadian content or assembly, as we shall see in Table 6-1.

6.1 Purchasers, planners and subgroups

Purchasers: the 425 interviewees who had purchased a new car, pickup truck, van, or SUV of model year 1998-2000 during the last six months before the interview. (Long-term leases are included among the "purchases.") Up to three new vehicle make-models were recorded: 367 of these people had bought one new vehicle within the time frame, 37 had bought two vehicles, and 21 had bought three. Seventy-three percent of the vehicles were Big 3 and 27 percent were foreign-based nameplates (close to the distribution of new vehicle sales for the entire United States - see Section 2.3).

In the study, we compared the purchasing values, knowledge and understanding of the label and the AALA, buying preferences, and influence of the label for Big 3 purchasers, transplant purchasers, and import purchasers. These subgroups are defined for the people who had bought exactly one new vehicle, and who specified its make-model during the interview:

Big 3 purchasers: 261 people had purchased exactly one vehicle, and it had a Big 3 nameplate (General Motors, Ford, or Chrysler). This subgroup includes make-models defined in Section 2.4 as "true domestic vehicles" such as Buick LeSabre, "international design cars built in Big 3 factories and sold with Big 3 nameplates" such as Ford Escort, and "transplants sold with Big 3 nameplates" such as Chrysler Sebring. Our sample did not include a single purchaser of a "captive import" (assembled overseas for the Big 3), such as Cadillac Catera. Thus, all 261 Big 3 vehicles were assembled in the United States, Canada or Mexico.

Transplant purchasers: 61 people bought one make-model that is exclusively or primarily assembled in the United States or Canada and sold under a foreign-based nameplate. In the language of Section 2.4, that includes "true transplants" such as Toyota Camry or Honda Accord, and a few "Big 3 designed and built vehicles sold with foreign-based nameplates" such as Isuzu Hombre.

Import purchasers: 32 people bought a make-model carrying a foreign-based nameplate, designed and assembled overseas - a "true import" in the nomenclature of Section 2.4, such as Lexus LS-400 or Hyundai Accent.

People who bought two or more vehicles during the past six months, or who didn't report the make-model, or who bought a vehicle that does not fit neatly in the preceding categories (such as Volkswagen Jetta) are not included in the three subgroups.

Planners: the 221 interviewees who said they intended to purchase or lease a new vehicle of model years 1998-2000 within the next three months after the interview.

The staunch "Buy-American" subgroup: We identified a subgroup of purchasers and planners that especially stresses buying vehicles with U.S./Canadian content and assembly and, more generally, strives to "Buy American" in all products. Responses to four of the survey questions were used to identify them: they said they "always" try to buy American when they go shopping, they said "built in the U.S. or Canada" is an important factor in selecting a vehicle, and moreover, they gave it the highest importance rating (a 7) and/or said it was the single most important factor for them. This subgroup contains 110 of the 646 interviewees in our sample, more than one-sixth. Given new-vehicle sales of 15 million per year in the United States, our sample suggests that this staunch "Buy-American" subgroup apparently purchases 2.5 million new vehicles annually. Moreover, in our sample, this subgroup's actions squared with their values. Among those who purchased one vehicle and reported its make-model, 100 percent bought vehicles assembled in North America: 96 percent were Big 3 vehicles assembled in the United States, Canada or Mexico and 4 percent were transplants assembled in the United States.

TABLE 6-1: FACTORS PEOPLE CONSIDER IMPORTANT WHEN BUYING OR LEASING A NEW VEHICLE
(Average numerical score: 0 = not important at all; 100 = very important)

Factor	All Purchasers and Planners	Big 3 Purchasers	Transplant Purchasers	Import Purchasers	Staunch "Buy-American" Purch. & Plan.
Reliability	93	93	96	90	97
How the vehicle drives	89	90	91	94	94
Safety	85	84	86	85	91
Price	76	72	84	70	68
Manufacturer reputation	76	76	81	67	90
Style or look	70	72	76	86	76
Vehicle size	70	76	64	57	78
Dealer reputation	61	65	58	49	73
Fuel economy	60	57	75	47	71
Optional equipment	55	58	47	59	67
Cargo capacity	54	59	42	43	70
Made in the USA/Canada	43	57	26	11	100
Brand image	35	37	39	34	46
Brand I always buy	34	35	34	27	57
That it is a foreign vehicle	17	12	23	18	21

6.2 Values: importance of vehicle content/"buying American"

Since a goal of the AALA labels is to inform consumers about where a vehicle was assembled and what countries produced its parts, a natural first question is whether consumers have any interest in such information, and to what extent they care about where a vehicle was built.

Purchasers and planners were read a list of 15 factors or attributes that *people might consider important* when buying or leasing a new vehicle. Two of the factors on the list were "that it is made in the U.S. or Canada" and "that it is a foreign vehicle." The other 13 are attributes likely to be important to a wide segment of vehicle buyers, such as reliability, safety, price, etc. This is not meant to be an exhaustive list. For example, it does not include factors that might be critical to some people, although not necessarily to the average buyer, such as a vehicle's horsepower, color, or sound system; its warranty; or the dealer financing and customer service.

Initially, respondents were asked to say what factors they considered "important" and which ones were "unimportant" in their own selection process. If they said a factor was "important" they were then asked to rate "how important" using a subjective scale from 1 to 7 where "1" means it is not at all a factor and "7" means it is a very important factor to them when they bought or will buy their next vehicle. The two responses for each factor were combined into a single numerical score ranging from 0 to 100, as follows: if the factor was "unimportant" their score was 0; if the factor was "important" and the rating a 7, the score was 100, and if the factor was "important" and the score was 1, 2, 3, 4, 5 or 6, the rating was 14, 29, 43, 57, 71, or 86, respectively. These scores can be averaged, on each factor, for any group of survey participants. (On each factor, the small number of respondents who did not answer whether it was important or unimportant, or who did not give a scale number if they said it was important, are not included in the computation of averages.)

Average scores were computed and compared for the full sample of all purchasers and planners; Big 3 purchasers, transplant purchasers, import purchasers, and the staunch "Buy-American" subgroup of purchasers and planners. Table 6-1 presents all the ratings, listing the factors in descending order of importance in the full sample. Purchasers and planners, on the whole consider reliability (average score 93), performance ("how it drives" - 89) and safety (85) to be the most important attributes for selecting a new vehicle. Next, scoring in the 70's, were price, manufacturer reputation, the style or look of the vehicle and its size. Factors such as dealer reputation, fuel economy, optional equipment, and cargo capacity were important to some but not necessarily to others, and had lower average ratings, from 61 to 54. By comparison to these widely valued factors, "that it is made in the USA or Canada," rated at 43, is not too important for the average planner or purchaser. Only "brand image" and "it's the brand I always buy" rated lower (35, 34). "That it is a foreign vehicle" scored the lowest by far, 17.

The full sample includes buyers of imports from overseas, who presumably consider "made in the U.S. or Canada" of little or no importance. But the subgroup of Big 3 purchasers, over 70 percent of the new-vehicle market, attached substantially more value than other buyers to a vehicle being made in the U.S. or Canada, averaging a score of 57. That's about as important as the vehicle's optional equipment (58), fuel economy (57), cargo capacity (59) and the dealer's reputation (65): a solid member of the "second tier" of selection factors. The "first tier" includes reliability, drive quality, safety, manufacturer reputation, price, styling and size, ranging from 72 to 93. Vehicle size is another factor that Big 3 purchasers considered more important than other consumers. Big 3 buyers indicated adamantly that they are not interested in "foreign" vehicles, and rated this attribute a 12.

Transplant buyers gave "made in the U.S./Canada" and "that it is a foreign vehicle" nearly identical, although rather low scores: 26 and 23. This interesting result could reflect several characteristics of transplant purchasers. Many of them, as will be shown in Section 6.3, are unaware their vehicle was assembled in North America and actually think they acquired an overseas-built vehicle. Others, who are aware of its North American assembly may still consider it a "foreign" vehicle in terms of its design, engine, transmission, etc. - and they like it. Thus, efforts by transplant manufacturers to increase public awareness of their North American assembly and parts content could be helpful in some markets, but not necessarily in all. Other attributes that transplant purchasers consider more important than the average consumer are price, fuel economy (a surprising 75) and, to a lesser extent, reliability (a very high 96, but this is high for all subgroups) and manufacturer reputation. This is a practicality-seeking group.

Import buyers rate "made in the U.S./Canada" a very low 11, well below the 26 rating it gets from transplant buyers and the 57 from Big 3 buyers. As we shall see in Section 6.3, most of them know they are buying an imported vehicle - and they don't care. But they rate "that it is a foreign vehicle" only at a low 18. In other words, few of them appear to buy imports specifically because they are imported. Two attributes this group really cares about are "how the vehicle drives" (94) and its "style or look" (86). Of course, safety and reliability are also crucial, as in other groups.

By definition, the staunch "Buy-American" subgroup rated "made in the U.S./Canada" at 100, since these were people who gave it a maximum 7 on the subjective scale. Table 6-1 suggests that this large group of consumers rates that attribute on a par with reliability, performance, safety and manufacturer reputation as a criterion for selecting (or not selecting) a new vehicle. They are also the only subgroup to give a high rating to "it's the brand I always buy" (57).

Interviewees were asked how often they make it a point to "buy American" when they shop for products in general, not necessarily motor vehicles or automotive equipment. Table 6-2 shows attitudes that closely parallel consumers' views on vehicle purchasing. Among all 646 purchasers and planners, 32 percent always strive to "buy American" and 50 percent sometimes. Among Big 3 purchasers, that rises to 40 percent who always try to "buy American." For transplant purchasers, it is only 15 percent, and for import buyers, just 6 percent. In other words, there are clear differences in the attitudes of Big 3, transplant and import buyers, but the transplant buyers' attitudes are somewhat closer to import buyers' than to the Big 3. Again, by definition, our staunch "Buy-American" group is limited to people who say they always try to "buy American."

TABLE 6-2

HOW OFTEN DO YOU MAKE IT A POINT TO "BUY AMERICAN"?
(In percent)

Buying Preference	All Purchasers and Planners	Big 3 Purchasers	Transplant Purchasers	Import Purchasers	Staunch "Buy-American" Planners and Purchasers
Always "Buy American"	32	40	15	6	100
Sometimes	50	47	60	61	0
Rarely or never	18	14	25	33	0

6.3 Knowledge of where vehicles are assembled

Since the AALA labels tell consumers in what country vehicles are assembled, it is appropriate to investigate the current (1998) level of consumer knowledge on that subject. We shall see if consumers know where their **own** vehicle was assembled, and if they can identify the country of assembly for a list of other make-models. The survey also asked consumers if they knew where to obtain such information.

The first analysis - knowledge of where one's own vehicle was assembled - is based on the 261 Big 3 purchasers, the 61 transplant purchasers and the 32 import purchasers who had bought exactly one vehicle and named its make-model. The survey did not get Vehicle Identification Numbers that would have allowed exact identification of the country of assembly. Nevertheless, the make-model alone is usually enough to identify a unique country of assembly (based on sales and production data of the sort analyzed in Chapter 2), and even in the cases where two countries were possible, those two were almost always "U.S. or Canada" or "U.S. or Mexico." The survey then asked the purchaser in what country his or her vehicle was assembled. Thus, it becomes possible to compare the actual assembly nation(s) to the country where the purchaser thinks it was assembled. Table 6-3 presents this information in four sections.

The upper section of Table 6-3 is limited to Big 3 make-models that we know, based on sales and production data, were assembled in either the United States or Canada. Nearly all (94 percent) of their purchasers correctly stated that their car or truck was made in the U.S./Canada; 5 percent didn't know, and only 1 percent believed they had bought an overseas-assembled vehicle.

TABLE 6-3

PURCHASERS' ANSWERS TO: "WHERE WAS YOUR OWN VEHICLE ASSEMBLED?"
(In percent)

Big 3 Models Actually Assembled in the U.S. or Canada

Purchasers said:	Percent
U.S./Canada	94 *
Overseas	1
Don't know	5

Big 3 Models Actually Assembled in the U.S. or Mexico

U.S./Canada	88 *
Mexico	8 *
Don't know/other	4

Transplants (Foreign-Based Models Actually Assembled in the U.S. or Canada)

U.S./Canada	54 *
Overseas	26
Don't know/other	20

Imports (Foreign-Based Models Actually Assembled Overseas)

Overseas, identifying correct country	64 *
Overseas, but identified wrong country	17
U.S./Canada	11
Don't know/other	8

* Correct answers

The second section of Table 6-3 addresses Big 3 make-models that are actually assembled in both the U.S. and Mexico. Typically (e.g., Ford Escort), more of the U.S. sales are assembled in the U.S. than in Mexico. Here, too, nearly all purchasers (96 percent) correctly believed their vehicle had been assembled in North America. Moreover, with 88 percent saying U.S./Canada and 8 percent saying Mexico, we can see that a fair proportion of purchasers are aware of the Big 3's Mexican assembly operations.

Thus, nearly all Big 3 purchasers either know for a fact that their vehicles were assembled in North America or they assume and take for granted that this is so. (Our survey sample did not include any "captive imports" such as Cadillac Catera, so we couldn't investigate where consumers think those are assembled.)

The third section of Table 6-3 indicates transplant purchasers have much lower, but still substantial knowledge about their vehicle's country of assembly. Just over half (54 percent) correctly stated that their car or truck was assembled in the U.S./Canada; 26 percent believed it was assembled overseas (usually in Japan); and 20 percent didn't know. Here is a cup half full and half empty at the same time: is it more surprising that the majority of transplant purchasers know that their own vehicle is assembled in North America, or that so many purchasers think they are built overseas and presumably view them as thoroughly "foreign" vehicles?

The last section of Table 6-3 shows that 81 percent of the purchasers of "true imports" (assembled overseas and sold by foreign-based companies) correctly stated their vehicle was assembled overseas; only 11 percent thought they were assembled in North America, and only 8 percent didn't know. (However, 17 percent identified the wrong overseas country.) These statistics differ from transplant purchasers in two ways: (1) a much higher percent of import purchasers know or think their vehicle is built overseas; (2) a higher percent of import purchasers answered the question correctly, or at least got the hemisphere right. Thus, when it comes to perceptions of **their own vehicles**, there is a clear distinction between transplant and import purchasers: only 26 percent of transplant purchasers believed they bought an import, and only 11 percent of import purchasers believed they bought a transplant.

Table 6-4 repeats the statistics of Table 6-3 but limited to purchasers in the **staunch "Buy-American"** subgroup, specifically the 61 individuals belonging to that subgroup who were purchasers (not planners), bought exactly one vehicle, and identified its make-model. As stated in Section 6.1, all of them bought Big 3 or transplant models that were actually assembled in North America. Table 6-4 shows their perceptions mesh with reality: 60 of the 61 correctly stated their vehicle was assembled in North America, and 1didn't know. Specifically, among the 50 people who bought Big 3 vehicles assembled in the U.S. or Canada, 49 (98 percent) correctly identified the U.S./Canadian assembly, and 1 didn't know. Nine people bought Big 3 make-models assembled in the U.S. or Mexico: 8 (89 percent) thought their vehicle was assembled in the U.S. and 1 (11 percent) thought it was built in Mexico. Presumably, this last individual considers a Big 3 vehicle assembled in Mexico consistent with his or her "Buy-American" values and/or learned of the Mexican assembly only subsequent to the purchase. The two (100 percent) staunch "Buy-American" buyers who purchased transplants did so in the correct belief that they were assembled in the United States or Canada.

TABLE 6-4

STAUNCH "BUY-AMERICAN" PURCHASERS'
ANSWERS TO: "WHERE WAS YOUR OWN VEHICLE ASSEMBLED?"
(In percent)

Big 3 Models Actually Assembled in the U.S. or Canada

Purchasers said:	Percent
U.S./Canada	98 *
Don't know	2

Big 3 Models Actually Assembled in the U.S. or Mexico

U.S./Canada	89 *
Mexico	11 *

Transplants (Foreign-Based Models Actually Assembled in the U.S. or Canada)

U.S./Canada	100 *

Imports (Foreign-Based Models Actually Assembled Overseas)

The staunch "Buy-American" group did not buy **any** vehicles assembled overseas

* Correct answers

As might be expected, consumers' knowledge of the assembly country is considerably weaker for make-models other than their own vehicle. All 646 purchasers and planners in our survey were read a list of various make-models of cars and trucks - Toyota Camry, Acura Integra, Jaguar, Volkswagen Jetta, BMW Z3, Chevrolet Blazer, and Ford Explorer - and were asked if they could name the countries in which they were assembled. Table 6-5 summarizes the responses for all purchasers and planners, and for the staunch "Buy-American" subgroup.

The first two sections of Table 6-5 compare consumer awareness of the Toyota Camry, one of the top-selling transplants, and Acura Integra, a high-volume import. Most consumers didn't know the difference. In fact, a higher percentage thought the Camry was assembled in Japan (59) than the Integra (46). Nearly the same proportion of consumers thought the Camry and the Integra were assembled in North America. In other words, even though Table 6-3 shows that many transplant purchasers learn at some point that their own vehicle is a transplant, the average consumer probably will not distinguish the transplants from the imports - in a list of popular foreign-based make-models - or on the showroom floor. In the staunch "Buy-American" subgroup, 63 percent thought the Camry was assembled in Japan and only 23 percent thought it was assembled in the U.S. or Canada. In other words, the group that cares most about where vehicles are built may be even less aware of transplants than the average consumer.

The next section of Table 6-5 concerns a European-built luxury car, Jaguar (now owned by Ford but still sold under its own nameplate). Many people realize it is imported from overseas and only a few think it is assembled in North America. Just over a third of the sample could identify the correct country of assembly, England.

The next two cars in Table 6-5 are produced by German-based companies and are now assembled in North America: Volkswagen Jetta (Mexico) and BMW Z3 (United States). Here, only 5 to 13 percent can identify the country of assembly, and the majority of consumers think they are built in Germany.

The last two make-models in Table 6-5, Chevrolet Blazer and Ford Explorer, are popular Big 3 SUVs. Unlike the other make-models, the overwhelming majority of interviewees, 90 percent or more, correctly stated that they are assembled in the United States. It would appear that a large proportion of consumers automatically associate "Chevrolet," "Ford" and other Big 3 nameplates with North American assembly.

Sources of country-of-origin information: The survey asked purchasers and planners how would they find out if a vehicle was assembled in the U.S./Canada or elsewhere. The interviewer did not read off a list of possibilities, but rather allowed the respondent to volunteer up to three sources on their own. Of course, an excellent method, at least in the showroom, would be to "look at the AALA label." However, only 13 percent of respondents said that they would look at the AALA label. That proportion is quite consistent with the data in the next section: Table 6-6 indicates that only 15 percent of new-vehicle buyers have ever seen an AALA label - i.e., most of those who have seen it know it specifies the country of assembly. But the percentage who know they can get the information from the label is well below the proportion of consumers who care, at least to some extent, about where the vehicle was assembled.

TABLE 6-5: CONSUMERS' ANSWERS TO
"WHERE WERE THE FOLLOWING VEHICLES ASSEMBLED?"
(In percent)

	All Purchasers and Planners	Staunch "Buy-American" Purchasers & Planners
Toyota Camry		
U.S.*/Canada	33	23
Japan	59	63
Don't know/other	8	14
Acura Integra		
Japan*	46	43
U.S./Canada	29	23
Don't know/other	25	34
Jaguar		
England*	38	31
U.S./Canada	12	8
Don't know/other	50	61
Volkswagen Jetta		
Mexico*	5	6
Germany	65	66
U.S./Canada	16	12
Don't know/other	14	16
BMW Z3		
U.S.*/Canada	13	12
Germany	55	53
Don't know/other	32	35
Chevrolet Blazer		
U.S.*/Canada	93	90
Don't know/other	7	10
Ford Explorer		
U.S.*/Canada	93	90
Don't know/other	7	10

* Correct answers

The largest number of people, 20 percent, said that they would ask the dealer where the vehicle was assembled. Thirteen percent said that they would find out where the vehicle was made by discussing this with other people. A surprising number of people, 11 percent, said that they would use the Internet, and 7 percent would look at magazines. Interestingly, nobody explicitly volunteered the method that seems to be most common in actual practice: buying a Big 3 vehicle and assuming that it's assembled in North America.

6.4 Awareness of the AALA law and label

The next part of the survey examined purchasers' and planners' awareness and knowledge about the parts content label, and the influence of the label on their purchase decision-making. First, the survey asked if they had heard or read about a law that requires car and truck dealers and manufacturers to place a label on all new vehicles showing in what country the vehicle and its parts were made. An overwhelming 78 percent of all purchasers and planners said no, and only 21 percent said that they had heard or read about the law.

Next, the survey asked respondents whether they were aware of the existence of the AALA label: had they heard of it or read about it somewhere? Have they ever seen one of the labels? Did they read one in a dealership? Table 6-6 summarizes the findings for all respondents, and for the various subgroups. Only 23 percent of purchasers and planners know of the existence of the label, 15 percent have seen one, and 7 percent have read one. (In other words, 23 percent of the [weighted] 646 survey participants knew of the existence of the label; 15 percent of the 646, and they are a subset of the first group, not only knew the label existed but had actually seen a label somewhere; and 7 percent of the 646, and they are a subset of the second [and the first] group, had seen and read the label while at the dealership. These percentages are not additive!) Yet, these are all people who recently bought or imminently would buy a new vehicle, people who likely visited showrooms and saw new vehicles with all their labels and stickers, or already have the vehicle in their garages, or at least are studying about new vehicles. Clearly, planners and purchasers, let alone the general public, were not well informed about the AALA label in 1998. Nevertheless, the labels are hardly going completely unnoticed: given 15 million new vehicle sales per year, over 2 million customers per year see the labels (15 percent) and over 1 million read them (7 percent).

It might be thought that purchasers are more aware of the labels than planners, since purchasers have already been through the showrooms to see new vehicles, while planners may just be starting the process. Table 6-6, however, shows minimal difference: 23 percent of purchasers and 22 percent of planners have heard of the label; 16 vs. 13 percent have seen it (not a statistically significant difference, given N = 425 purchasers and 221 planners); and an identical 7 percent have read it.

Interesting and perhaps ironic differences show up in the three subgroups of purchasers. Big 3 buyers are almost as familiar with the label as the average purchaser. Transplant purchasers were slightly less likely to have heard, seen, or read the label, and were less likely to know that they were buying a car or truck made in the United States or Canada, even though this group is targeted by transplant manufacturers for "made in the U.S.A." campaigns. Import purchasers

TABLE 6-6

HAVE YOU HEARD OF, SEEN, OR READ THE AALA LABEL?
(In percent)

	All Purchasers & Planners	**All Purchasers**	**All Planners**	**Big 3 Purchasers**	**Transplant Purchasers**	**Import Purchasers**	**Staunch "Buy-American" Purchasers and Planners**
Have heard of label	23*	23	22	22	17	38	20
Have seen label	15*	16	13	13	12	33	11
Have read label	7*	7	7	5	6	19	9

*In other words, 23 percent of the [weighted] 646 survey participants knew of the existence of the label; 15 percent of the 646, and they are a subset of the first group, not only knew the label existed but had actually seen a label somewhere; and 7 percent of the 646, and they are a subset of the second [and the first] group, had seen and read the label while at the dealership. These percentages are not additive!

were, overall, the most informed about the label. Import purchasers were more aware of the label than any other group, and they were 2 to 3 times as likely to have seen and/or read the label - even though, as shown in Table 6-1, they are the group least interested in where vehicles or their parts come from. As we shall see in Section 6.7, this probably has more to do with demographic characteristics of import purchasers than their intrinsic interest in the material on the labels.

Conceptually, the staunch "Buy-American" subgroup ought to be especially responsive to the AALA labels. But in reality they are no more cognizant of the labels than the average consumer: 20 percent of them had heard of the label, 11 percent had seen it and 9 percent had read it. Rather than using the labels to identify vehicles assembled in North America and containing a high share of U.S./Canadian parts, they mostly feel they have "bought American" merely by acquiring any Big 3 vehicle assembled in North America.

6.5 Understanding of the AALA label

The survey included several questions that explored to what extent the AALA label was understood by those 41 purchasers and planners who had been to a dealership and who had read a label. First, they were asked their subjective opinion whether the label as a whole, without reference to any specific portion of it, was "easy to understand." Eighty-six percent said that they found the label "very easy" or "somewhat easy" to understand, whereas only 14 percent said that the label was "not too easy" or "not easy at all" to understand.

However, specific quizzing revealed these consumers' understanding of the numerical scores on the label is, in fact, quite shaky (as opposed to the label's simple declaration of the country of assembly). People who had read the label were asked what they thought the numerical scores meant. Fifty-seven percent correctly replied that the first score meant the U.S./Canadian parts content and the other scores indicate parts content from other countries. Sixteen percent replied more vaguely that the numbers represented where the car was built/the point of origin. Nine percent said that the numbers pertain to parts numbers for identification and ordering parts, and the remainder had various answers such as paint color numbers, serial number of the car, and quality standards for the car.

People who had read the label were asked whether parts made in Canada or Mexico are included in the principal numerical score on the parts content label. The correct answer is that Canadian parts are included and Mexican parts are excluded. However, only 35 percent of respondents said that parts made in Canada are included on the label, whereas 23 percent incorrectly said that parts made in Mexico are included on the label.

6.6 Influence of the AALA label on past and future purchasing decisions

Of the 41 purchasers and planners who had read the AALA label at the dealerships, most (33 people) came across the label on their own, and only six said that the salesperson pointed it out and explained to them the meaning of the U.S./Canadian parts content label. Three individuals said that the salesperson made the label an important part of the sales presentation. From these data it appears that the salespeople seldom provide prospective buyers with information about the label at the dealership.

The same 41 people who had read the label were asked how much influence, if any, the information had on their purchase or lease consideration. They were asked to rate the label's influence on them using a subjective scale of 1 to 7, where 1 means no influence at all and 7 means a great deal of influence. The distribution (weighted) was:

Score	Percent
1 (no influence at all)	26
2-4 (slight/moderate influence)	25
5-6 (stronger influence)	34
7 (a great deal of influence)	15

The mean and median were both 4, indicating that the label had perhaps a moderate influence on the average person who read it. Given that 7 percent of all purchasers and planners had read the label at the dealership (Table 6-6) and 26 percent of these were "not influenced at all," we may infer that approximately 5 percent of all purchasers and planners are currently influenced by the AALA label at the dealership, at least to some extent.

Next, the 20 respondents that gave a score of 5, 6 or 7 were asked to describe in their own words how the information on the label influenced their purchase. Fourteen gave specific, relevant answers: 8 said they learned that "the vehicle was made in the U.S./Canada," 4 "would not have bought a 'foreign' made car," 1 discovered that the vehicle "was 'foreign' made," and 1 "bought it because it was not American made." Interestingly, all of these answers appear to draw upon the country-of-assembly information on the label. Not a single person explicitly stated they had used the numerical parts-content scores to comparison-shop among make-models, or that they had selected or rejected a specific vehicle because of its high or low percentage of U.S./Canadian parts content. Nor did anybody say they were influenced by the AALA label's information on the country of origin of the engine or the transmission.

Potential future influence: People who initially said they were unaware of the existence of the AALA label were asked, towards the end of the survey, "Now that you are aware of the label, would the label influence your future purchase of a vehicle?" Fifty-six percent said yes. That is a much larger proportion of the purchasers and planners than the current 5 percent who had read and were influenced by the label in their recently past purchase decision. This should not be dismissed as merely "people trying to please the interviewer" because respondents were quite candid on the other parts of the interview - e.g., most people freely admitted they had never heard of the labels, or frankly stated they did not care where a vehicle was assembled. It indicates that the AALA information could have substantially more impact if consumers were more widely aware of it.

6.7 Influence of demographic factors

Metropolitan vs. nonmetropolitan: Purchasers and planners' responses were examined by their geographic location - i.e., according to the areas in which the respondent lives: large city, suburb of large city, small town, or rural area. The respondents' answers were separated into two categories: metropolitan and nonmetropolitan, to determine if there were any differences in the respondent's choices or knowledge and influence of U.S./Canadian content by demographic areas.

The data indicates that nonmetropolitan purchasers and planners have a stronger propensity to "buy American" (always make it a point to "buy American" whether it's cars or any other items) than metropolitan purchasers (42 percent compared to 28 percent). However, roughly 50 percent of both groups said that one of the reasons why they would buy or lease a new vehicle is that it is made in the USA or Canada. Both groups agreed that reliability was the most important reason why they would choose to buy or lease a new vehicle (although nonmetropolitan buyers placed a greater importance on this attribute than metropolitan buyers), followed by safety. That a vehicle is made in the USA or Canada scored very low, between one and 3 percent, by both groups as the *most important* reason why they would choose to buy a vehicle.

Metropolitan purchasers and planners were more often aware of the existence of the AALA than nonmetropolitan consumers (26 percent compared with 22 percent) and a higher percentage had seen an AALA label (21 percent compared with 9 percent). In both groups, low percentages said that the label had influenced their purchase considerations; however, a greater proportion of the metropolitan purchasers said that now that they are aware of the label, it would influence their future purchases.

Education: Purchasers and planners were divided into two categories according to their educational status: people who had completed school from 8th grade through technical school, and people who had completed college or post-graduate school.

Nearly one-half of purchasers and planners with 8th grade or technical school education said that they always try to buy American, compared with one-third of buyers with college or post-graduate school. Both groups said that safety and reliability were the most important reasons why they would choose to buy or lease a new vehicle. That it is made in the USA or Canada was a minor reason for both to purchase a vehicle.

More people in the college-educated group knew about the AALA compared with the non-college-educated group. Roughly the same percentage of both groups knew about the label. A greater percentage of a non college-educated buyers said that the label would influence them in the future compared with college-educated buyers.

Younger vs. older consumers: Responses from purchasers and planners who were at least 50 years of age were compared with responses from those less than 50 years old to determine whether there were any differences in opinions and purchasing choices between the two categories. A greater percentage of purchasers and planners over 50 (63 percent) than under 50 (48 percent) said that an important reason why they would buy or lease a vehicle is that it is made in the USA or Canada. Conversely, a greater percentage of those under 50 compared with over

50 said that a reason they would buy is that it is a foreign vehicle (28 percent compared to 18 percent).

An equal percentage of purchasers and planners over 50 and under 50 knew of the AALA and the label (24 percent for both), although a greater percentage of those under 50 had seen the label (18 percent compared with 12 percent of all purchasers and planners). Purchasers over 50 said that the label influenced them more, compared with buyers under 50 (on a scale of zero to 100, they rated influence as 57 compared with 41 for purchasers under 50). More purchasers over 50 (63 percent) said that the label would influence them in the future compared with younger purchasers (53 percent). Finally, a greater percentage of purchasers and planners over 50 make it a point to "buy American" whether it is cars or any other item (89 percent said always or sometimes, compared with 76 percent of buyers under 50).

CHAPTER 7

MANUFACTURER SURVEY

The objectives of the manufacturer information collection are to: inquire about the effects of the AALA on manufacturers of vehicles in terms of cost, manufacturing changes, parts sourcing and sales. The survey was sent to all 21 manufacturers selling vehicles in the United States. Survey data collection took place over a 21-week period. All manufacturers responded to the survey; 17 manufacturers completed the survey and 4 returned partially completed surveys. Subject areas covered in the manufacturer survey include knowledge of customer awareness of the existence of the parts content label, guidance or information provided to dealers and customers regarding the labels, shifts in parts sourcing and assembly of vehicles from one country to another, factors affecting shifts in sourcing and manufacturing, costs to start up implementation of the AALA, annual costs for data collection and maintenance of databases, overall costs to manufacturers, cost of the program to suppliers, and manufacturers' estimate of U.S./Canadian (USCan) parts content in their model year 1994 vehicles.

A principal finding is that only two manufacturers stated that the AALA labels, or a desire to increase USCan parts content motivated them to relocate production facilities or sources of component parts. Most manufacturers believe that consumers have little interest in the labels. The great majority of manufacturers see little value in the label information as a marketing tool or selling point for their vehicles.

7.1 Dissemination and perceived importance of the labels

Part A of the survey questionnaire was completed by the sales/customer relations offices within the vehicle manufacturing company. Job titles of the respondents were fairly evenly divided among the following: principal engineer, sales planning/training manager, safety engineering department manager, program manager tax staff, compliance manager/director/engineer, vehicle safety and legislation function leader, inter-company pricing and trade issues specialist, and national customer relations manager. Manufacturers reported the makes and models of vehicles they produced.

<u>Importance of USCan parts content</u>: The manufacturers were asked to rate on a scale of 1 to 7, where 1 means "not at all a factor" and 7 means "a very important factor," how much USCan parts content is a factor in selling vehicles in the United States. Of 21 respondents, 15 rated parts content as a "1" and six ranked parts content a "2" or "3."

<u>Are customers aware of the label?</u>: Manufacturers reported their perception of what percentage of customers is aware of the existence of the parts content label, as shown in Table 7-1. The mean is 10.81 percent, the median is 5 percent. Manufacturer's perceptions can be compared to the actual experience of consumers: in our consumer survey (Table 6-6), 23 percent of customers said they knew of the existence of the label, but only 15 percent had seen a label and only 7

percent had read a label at a dealership. Thus, manufacturers' perceptions are lower than the percentage of consumers who knew of the existence of the label, but quite similar to the percentage who had read the label.

TABLE 7-1

PERCENTAGE OF CUSTOMERS WHOM MANUFACTURERS THINK ARE AWARE OF THE EXISTENCE OF PARTS CONTENT INFORMATION LABELS

PERCENTAGE	NUMBER OF MANUFACTURERS
0	4
1	2
2	2
4	1
5	2
10	5
12	1
25	1
30	1
40	1
50	1

Guidelines and materials provided to dealers: Manufacturers were asked whether they had ever given dealers any guidelines or materials for training sales staff to explain the information on the label. Eighteen manufacturers responded that they had not given dealers guidelines or materials, while two manufacturers responded yes. One manufacturer did not respond.

One manufacturer prepared an explanation of the requirements in 1994 when the AALA was first introduced, but provided nothing in subsequent years. Another manufacturer developed and provided a guide that was made available at the 1994 dealers' meeting; however, there was no mass mailing to dealers. Another manufacturer prepared and sent a letter of explanation to all dealers with the instructions that the label has to be on the vehicle.

Manufacturers were asked if they had ever encouraged or required dealers to make customers aware of the parts content label. Nineteen manufacturers reported no. Only one manufacturer responded yes, but said that they discontinued this practice because the selling point has declined in importance except for trucks. When asked if they had ever provided dealers with any guidance or recommendations for using the parts label as a selling point, 18 manufacturers said no, and two reported yes. One manufacturer repeated that they discontinued this practice because the selling point has declined in importance except for trucks.

Manufacturers were asked if they had ever provided customers with information about USCan parts content in addition to the label. Sixteen manufacturers responded no, and four responded yes. One manufacturer said that they prepared customer and dealer information when the law first went into effect; however, they found that none of their customers was interested in the label, and so they discontinued distribution of the information.

Advertising strategies: Regarding whether "Built in America" or some other reference to America is used or had ever been used in their advertising strategies, 15 manufacturers responded no, while five responded yes. One manufacturer reported that the "Built in America" approach did not seem to have an impact on their customers, so they changed to another advertising campaign. Another manufacturer said that this selling point has declined in importance.

As regards advertising methods in various media, only two responded. One manufacturer showed parts content information in brochures, newspaper ads, magazine ads, and television ads.
A second manufacturer showed parts content information in brochures and magazine ads.
Manufacturers were asked if they had any data or experience that suggests USCan parts content is important to consumers; 19 manufacturers responded no, and one said yes. Manufacturers were asked if they had developed a consumer guide to USCan parts content for dealers to give to customers; 19 manufacturers responded no, and two didn't know. Regarding whether they think parts content information labels are understandable to the customer, ten manufacturers said no, eight responded yes, and two didn't know.

7.2 Factors that affect decisions where to locate facilities or buy parts

A principal finding of Chapter 2 is that foreign-based manufacturers substantially increased USCan parts content from 1995 to 1998 in the transplant vehicles they assemble in North America, whereas the Big 3 tended to reduce USCan and increase Mexican parts content. This section of the survey gave each manufacturer an opportunity to declare explicitly whether AALA and/or other factors influenced the shifts in USCan content.

Part B of the questionnaire supplied the data for this section and the remaining sections of this chapter. It was completed by the finance/accounting office within the vehicle manufacturing company. Job titles of the respondents were fairly evenly divided among the following: principal engineer, sales planning/training manager, safety engineering department manager, program manager tax staff, compliance manager/director/engineer, vehicle safety and legislation function leader, inter-company pricing and trade issues specialist, national customer relations manager.

Production shifts before AALA: Manufacturers were first asked what significant shifts in content or assembly, if any, they undertook in the five years **prior to 1995** - i.e., before AALA took effect. Two manufacturers reported an increase in U.S. production of vehicles and sourcing local content during the 1990's. A few manufacturers shifted parts sourcing and vehicle assembly to North America. A few manufacturers reported various shifts in production and sourcing within North America. No manufacturer said that any of their pre-1995 shifts were motivated by the AALA.

Production shifts to and from the manufacturer's home country - after AALA: Manufacturers were next asked if they had "recently[1]" shifted any of their product lines or component parts from production outside their "home" country to production within their "home" country. The Big 3 might interpret this as shifting production from outside of the U.S. to within the U.S.; foreign-based manufacturers might interpret this as shifting production from a nation (perhaps but not necessarily the U.S./Canada) outside the home country to within the home country (definitely not the U.S./Canada). Six manufacturers responded yes, and nine said no. Those that said yes were shown a list of 19 possible motivational factors, including "parts content information labels" and "wanted vehicles to have higher US/Canadian parts content." They were asked to check any factor that applied, and identify the three most important factors.

Manufacturers were similarly asked if they had "recently" shifted product lines or component parts from inside their home country to outside. For the Big 3, this could mean shifting production from the U.S. to other countries; for foreign-based manufacturers, this means shifting production from their home country to outside (and possibly, but not necessarily, to the U.S./ Canada). Six manufacturers responded yes, and 10 said no. Those that said yes were shown 16 possible motivational factors (3 factors, including "wanted vehicles to have higher US/Canadian parts content" from the previous list were omitted). Again, they checked all factors that applied, and identified the three most important factors.

The format of these questions can leave it unclear if a shift involved the U.S./Canada and also may have confused some respondents (what country does the employee of a North American subsidiary of a foreign-based company call "home"?). Therefore, the data from both sets of questions have been combined into a single analysis. Table 7-2 lists the 19 motivational factors cited in the questionnaire. It counts how many times each factor was checked on either set of questions, and how many times it was listed in the top three on either set of questions.

Only a single Big 3 manufacturer, and no foreign-based company said that the "parts content information label" was a specific factor in shifting production or component parts from one country to another. This Big 3 manufacturer and one foreign-based manufacturer also said, more generally, that they shifted operations because they "wanted vehicles to have higher USCan parts content." One of them said that this was one of the top three reasons for the shift. Ironically, neither of these two companies particularly increased their actual overall USCan content during

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[1]The questionnaire did not specify a time frame (see Appendix E, Part B, Questions 3-4). We may surmise that manufacturers could interpret "recently" as the 1995-98, post-AALA time frame, since the preceding question referred to the five years prior to 1995.

TABLE 7-2

FACTORS THAT CONTRIBUTED TO THE SHIFT OF PRODUCT LINES
OR COMPONENT PARTS TO OR FROM THE MANUFACTURERS' HOME COUNTRY

FACTORS CONTRIBUTING TO SHIFT	ALL RESPONSES	THREE MOST IMPORTANT FACTORS
Parts content information labels	**1**	
Wanted vehicles to have higher U.S./Canadian parts content	**2**	**1**
Cost of labor	4	1
Quality of labor	2	
Availability of human resources	1	1
Cost of materials	7	3
Quality of materials	4	1
Availability of materials	2	
Availability of physical plant/equipment	6	3
Operating costs	5	3
Distribution costs	3	1
Wanted to create jobs for Americans	2	
Customer demand	4	3
Currency exchange rate	6	2
Import duties	3	1
Taxes	2	
Availability of credit to invest in physical plant	2	
Government policies of home country	2	1
Federal, State or local incentives to invest in the United States	2	

1995-98. It is noteworthy that, on this questionnaire, **none** of the foreign-based manufacturers that substantially increased North American assemblies and/or USCan content in their transplant vehicles, as shown in Section 2.7, stated that the AALA labels, or a desire for higher USCan content motivated their action.

Above all, Table 7-2 shows that manufacturers portray cost factors as reasons to shift product lines or parts: cost of labor, cost of materials, operating costs, distribution costs, currency exchange rates, import duties and taxes. Availability and quality of equipment, materials and human resources were also rated important.

Influence of exchange rates: Manufacturers were asked to rate, on a scale of 1 to 7 where 1 means "not at all a factor" and 7 means "a very important factor" how much of a factor the currency exchange rate relationship is in the manufacturer's decision regarding where to produce auto parts and vehicles. Five manufacturers rated exchange rate as 2 or 3, six manufacturers rated 4 or 5, and two manufacturers rated 6 or 7. Three manufacturers said that they did not know.

Influence of fleet vehicle purchasers: Manufacturers were asked if any fleet vehicle purchasers expressed an interest in the parts content information labels. Twelve manufacturers reported no, two said yes, and three manufacturers did not know. Manufacturers were asked if any fleet vehicle purchasers indicated a preference for vehicles with high USCan parts content. Eleven manufacturers responded no, two reported yes, and four did not know.

7.3 Cost of AALA to manufacturers

Overall cost of AALA to date: Manufacturers were asked to estimate their overall cost to implement the AALA, and reported a range of costs from less than $250,000 to over $6 million, as shown in Table 7-3. These costs represent cumulative costs from the implementation of the AALA in late 1994 until the time of the survey in September 1998. According to manufacturers, these costs include programming systems; developing processes; labor costs for additional people; administrative and training; sending and receiving supplier information; tracking origin of all parts; performing calculations and currency conversions; providing AALA information to their U.S. importer; incorporating information into the Monroney label[2]; computer hardware and software and associated service personnel; manpower to obtain supplier certificates and calculate parts content value; procure and distribute labels and apply them to the vehicles. It appears that no single factor seems to account for a majority of the cost. The estimated median cost among the 21 manufacturers was $1.0 million.

[2]The Monroney label is a sticker on the vehicle window required by law that shows the base price, options, retail price, destination charges, and fuel economy.

TABLE 7-3

MANUFACTURERS' ESTIMATED OVERALL
COST TO IMPLEMENT THE AALA

COST TO IMPLEMENT THE AALA	NUMBER OF RESPONSES
Less than $250,000	3
$250,000 to less than $500,000	4
$500,000 to less than $1 million	3
$1 million to less than $2 million	1
$2 million to less than $3 million	1
$3 million to less than $4 million	0
$4 million to less than $5 million	0
$5 million to less than $6 million	2
Over $6 million	1
Don't know/no response	6

Based on the costs from Table 7-3, manufacturers' estimated total cumulative costs to implement the AALA ranges from $37,875,000 to over $47,500,000 (assuming the manufacturers with unreported costs had the same distribution as those not reporting their costs). The total estimated overall cost per vehicle to implement the AALA ranges from $0.63 to over $0.79 per vehicle, based on 21 manufacturers' total estimated overall cost to implement the AALA and sales of approximately 60 million passenger cars and light trucks during the period October 1994 to September 1998.

Manufacturers attributed their costs to implement the AALA to the factors listed in Table 7-4.

TABLE 7-4

FACTORS AFFECTING COSTS

FACTORS AFFECTING COSTS	NUMBER OF RESPONSES
Incremental manpower/number of manpower hours	3
Systems development	1
Administrative and training	1
Label inventory/distribution	1
Tracking of parts/information	1
Calculations/calculations of final percentages	2
Obtaining/sending information from/to suppliers	0
Labor costs	1
Miscellaneous factors	5
No factors cited	13

Hours for startup: As regards to the number of hours spent on the startup to implement the AALA, manufacturers provided the responses shown in Table 7-5. The median is 850 hours and the mean is 5,698 hours for the 10 manufacturers that responded.

Startup costs: Startup costs are a one-time cost to begin implementation of procedures for collecting information to meet AALA. requirements. Manufacturers offered the following explanation for the AALA startup costs: systems development, administrative and training, incremental manpower, new computer based systems used to prepare, calculate, and retain AALA information, tracking AALA regulations, company discussions, changes in purchasing database, obtaining and entering data from suppliers, developing reporting routines, and undergoing major changes for a few years because of constant changes in the law.

Table 7-6 indicates that manufacturers' median startup cost is an estimated $250,000. The sum of the estimated startup costs for the 21 manufacturers range from $5,200,000 to over $6,050,000.

TABLE 7-5: NUMBER OF HOURS MANUFACTURERS SPENT ON THE STARTUP TO IMPLEMENT THE AALA

NUMBER OF HOURS	NUMBER OF RESPONSES
100	1
200	1
500	1
600	1
800	1
900	1
2500	1
7500	1
13000	1
30880	1
Don't know/no response	11

TABLE 7-6: MANUFACTURERS' STARTUP COSTS FOR THE AALA

STARTUP COST	NUMBER OF RESPONSES
Less than $100,000	2
$100,000 to less than $200,000	2
$200,000 to less than $300,000	4
$300,000 to less than $400,000	0
$400,000 to less than $500,000	0
Over $500,000	4*
Don't know/no response	9

* Adjusted for assumptions.

Annual staff hours spent on AALA: Table 7-7 shows how many staff hours the manufacturers spend each year to maintain compliance with AALA. The median number of annual hours spent is 576 and the mean is 1,601 hours for the 12 respondents.

TABLE 7-7: MANUFACTURERS' ANNUAL HOURS SPENT FOR OPERATING AND MAINTENANCE OF AALA

NUMBER OF HOURS	NUMBER OF RESPONSES
36	1
40	1
80	1
100	1
160	1
325	1
830	1
1000	1
1250	1
1500	1
3760	1
10125	1
Don't know/no response	9

Annual costs for operating and maintenance: Manufacturers were asked to indicate how much they spent annually for continued operating and maintenance costs associated with the AALA. Their responses are shown in Table 7-8. Manufacturers' estimated annual costs for operating and maintenance of AALA range from $20,000 to over $100,000.

TABLE 7-8: MANUFACTURERS' ANNUAL COSTS
FOR OPERATING AND MAINTENANCE OF AALA

ANNUAL COSTS	NUMBER OF RESPONSES
Less than $20,000	2
$20,000 to less than $40,000	1
$40,000 to less than $60,000	4
$60,000 to less than $80,000	1
$80,000 to less than $100,000	0
Over $100,000	6
Don't know/no response	7

Manufacturers offered the following explanations for annual costs for data collection and maintaining the database for the content reporting requirements for the AALA: the AALA does not include systems maintenance costs associated with the generation of stickers; additional costs include label inventory and applying the correct labels to every vehicle year before dealer shipments; number of manpower hours multiplied by applicable labor rate determined annually; labor costs, review bill material, initiate, review, follow-up, and data entry of supplier responses; calculation of final percentages and analysis; continued operation and maintenance costs; obtaining information from suppliers; daily tracking of information. The estimated median annual cost for operating and maintenance is $70,000. If 21 manufacturers spent $70,000 each, the total cost would be $1,470,000, and the marginal cost per new car or truck would be $0.098. Even if the mean is 2 or 3 times higher than the median the marginal cost (excluding startup costs) would not exceed $0.295 per vehicle.

<u>AALA costs vs. NAFTA and CAFE</u>: Manufacturers were asked if the cost for data collection and maintaining the database for the content reporting requirements for the AALA are higher, lower, or about the same as the costs incurred for the North American Free Trade Agreement. Two manufacturers reported higher costs, three manufacturers reported lower, and five reported the same. Eleven manufacturers did not respond or said they did not know.

Manufacturers were asked if the cost for data collection and maintaining the database for the content reporting requirements for the AALA are higher, lower, or about the same as the costs incurred for data collection for assigning passenger cars to domestic or import fleets for Corporate Average Fuel Economy. Eight manufacturers reported that the costs were higher, one reported lower, two reported that the costs were the same, and ten did not know or did not respond.

USCan content in model year 1994: Manufacturers were asked to consider the model year 1994 vehicles they manufactured and to provide an estimate of each carline's USCan parts content, using AALA definitions. The purpose of this question was to find out if any major changes in USCan content occurred from 1994 to 1995, even before the AALA took effect. (Such changes would not have been revealed in the Chapter 2 analysis, which is based only on AALA compliance data from 1995 through 1998.)

Two large manufacturers provided data that indicated no changes in USCan content from MY94 to MY95, while a few smaller manufacturers reported small increases in USCan content during this period. While it is difficult to draw conclusions from this limited response, it would appear there was no substantial increase in overall USCan content between model year 1994 and 1995.

Cost of AALA to suppliers: Manufacturers were asked if their suppliers use a single form for reporting information required for the NAFTA, CAFE, and the AALA, thus reducing suppliers' reporting costs. Twelve manufacturers said no, two reported yes, and eight did not know or did not answer.

Table 7-9 indicates what kinds of costs manufacturers say AALA imposes on suppliers.

TABLE 7-9

COSTS IMPOSED ON SUPPLIERS AS A RESULT OF THE AALA

COSTS	NUMBER OF RESPONSES
Annual employee hours	10
Payroll costs	11
Set-up and maintenance of computer database	10
Cost of paper certificates	6
Don't know/no response	10

Manufacturers reported their estimates of the overall cost of this program to suppliers to date, as shown in Table 7-10. Manufacturers' estimated median cost to suppliers is $200,000, and the mean is $475,167 for the six manufacturers that responded.

TABLE 7-10: MANUFACTURERS' ESTIMATE OF COST TO SUPPLIERS

COST	NUMBER OF RESPONSES
$999	1
$150,000	1
$200,000	1
$500,000	1
$1,000,000	2
Don't know/no response	15

Manufacturers were asked whether all of their purchase orders to suppliers include a requirement to furnish USCan parts content information. Seven manufacturers responded yes, seven responded no, and seven did not know or did not answer.

Table 7-11 presents manufacturers' reports on what percent of their suppliers furnish USCan parts content information. The median percentage of suppliers that furnish USCan information is 92.5.

TABLE 7-11: PERCENT OF SUPPLIERS THAT FURNISH U.S./CANADIAN PARTS CONTENT INFORMATION

PERCENT	NUMBER OF RESPONSES
1	1
35	1
80	2
90	2
95	1
97	1
99	1
100	2
Don't know/no response	10

Manufacturers were asked by what percentage their costs will change following the end of the 2-year provision which allows flexibility in making estimates of content determinations where outside suppliers have not responded to requests for content determination. Manufacturers' costs would presumably increase when the provision allowing flexibility in making estimates expires. Four manufacturers responded they did not expect any cost increase, two expected a 10 percent increase, one each expected 12, 25, and 50 percent increases, and 12 did not know or did not respond.

CHAPTER 8

DEALER SURVEY

The objectives of the dealer information collection are to: inquire about the extent to which new-vehicle dealers understand the content labels, provide this information to potential and actual customers, and find it useful or detrimental in marketing.

Subject areas surveyed in the dealer questionnaire included dealer awareness of the AALA and label, dealer advertising of the label through various media, dealer franchise and sales volume, customer knowledge and understanding of the label, customer consideration of information on the label in purchase decisions, customer buying preferences, sales staff awareness and understanding of the label, sales staff training, guidelines and materials provided by manufacturers to dealers and staff, and use of information on the label in sales presentations.

While most dealers see little value in the label information as a marketing tool for the average consumer, quite a few dealers acknowledge that there is a substantial group of consumers that cares about "Buying American," and that this group finds the AALA label useful, especially for identifying a vehicle's country of final assembly.

8.1 Description of the sample

Survey data collection took place over a 14-week period. The survey was mailed to 500 dealers in August 1998, and 195 completed surveys were returned, as explained in Section 5.5. Job titles of the respondents included dealer/principal (50 percent), general manager (31 percent), sales manager (14 percent), owner (1 percent), and salesman (1 percent).

Sixty-four percent of the respondents had franchise total gross annual new vehicle sales volumes of less than $25 million, 11 percent reported sales volumes of $25 to $49 million, 7 percent reported sales of $50 million to $100 million, and 2 percent reported sales of over $100 million.

Sixty-seven percent of dealer respondents had one to ten persons on their new vehicle sales staff. Twenty-two percent of dealers had new vehicle sales staffs of 11 to 20 persons, and 4 percent had staffs of 21 to 60 persons.

8.2 Dealer awareness of the label

The survey began by asking dealers how aware they are of the AALA and the parts content label. An overwhelming 81 percent of dealers had at least some knowledge of the AALA regulation and the label. This is distributed as follows: 53 percent of dealers said that they were very aware of the regulation and the label, 28 percent responded that they were somewhat aware. Seventeen percent said that they were not very aware or not at all aware of the AALA and the label.

8.3 Dealer advertisement of the label

Dealers were asked to report what media they used for presenting parts content information. Approximately 80 percent of dealers said they do not advertise parts content information or did not specify a medium. Of those dealers who do advertise, information is conveyed primarily through in-store displays and brochures, as shown below:

MEDIA PRESENTATION	PERCENT OF DEALERS
In-store Displays	10
Brochures	8
Newspaper Ads	2
Magazine Ads	1
Television Ads	1
Radio Ads	0
Other	4
None	58
Don't Know	21

8.4 Dealers' perceptions of customer response to the labels/buying preferences

<u>Customer awareness and understanding of the label</u>: Dealers were asked to rate customer awareness and comprehension of the parts content information on the label on a scale of 1 to 7, where 1 means "describes none of my customers" and 7 means "describes all of my customers." The responses were distributed along a scale of zero to 100, for ease of comparison, where zero corresponds to 1 and 100 corresponds to 7. Dealer responses to the scale that fell between 2 and 6 were distributed along the zero to 100 scale, based on the assumption of linear gradation of intermediate values on a scale from 17 through 83.

Regarding customer awareness of the existence of the label, dealers scored customers a moderately low 36, with a standard error of 1.8. Dealers scored customers an even lower 25 when asked if they read the label on the vehicle window (standard error of 1.7). Furthermore, dealers rated customers at a low 16 regarding whether customers ask questions about the information on the label (standard error of 1.6). However, of the customers who read the label, dealers indicated that a fair number understand the label (score of 40, standard error of 2.6). The number of dealers that responded to these questions ranges from 155 to 172, out of a total of 195 dealers.

These data indicate that dealers presume that a fairly low number of customers know of the regulation and label, and a few are sufficiently interested to read and ask particulars about the information on the label. In fact, the consumer survey (Table 6-6) indicated that only 23 percent of customers actually knew of the existence of the label and only 7 percent had read it. If the preceding numerical scores in the dealer survey are equivalent to percentages (although it is not clear that they should be), it may be inferred that dealers, if anything, slightly overestimate the level of customer awareness of the labels.

The dealers were divided into two subgroups: the 120 dealers selling exclusively Big 3 nameplates; and the 42 "foreign-based" dealers selling exclusively nameplates of foreign-based companies. (The 21 dealers selling both Big 3 and foreign-based nameplates and the 12 dealers who did not specify what nameplates they sold were not included in the subgroups, but were included in the analyses of all 195 dealers.) The two subgroups were analyzed to evaluate whether any variations exist between the dealerships, their sales staff and customers, and their survey responses. The responses for the subgroups were calculated the same as above, by converting the 1 to 7 scale to zero to 100.

With respect to the dealers' perception of customer awareness of the existence of the label, customer reading the label on the window of the vehicle, customer asking questions regarding information on the label, and customer understanding of the label, both Big 3 and foreign-based dealers responded similarly, except that a few more foreign-based dealers than Big 3 said that customers read the label on the vehicle window (score of 27 compared to 24), and slightly more foreign-based dealers said that customers understand the label (score of 43 compared to 38). It appears that more customers in foreign-based dealerships are curious about parts content information, but perhaps this is because these customers are aware that vehicles of foreign-based companies could be assembled either in North America or overseas and they are seeking particular information, whereas the customer in the Big 3 dealership may take for granted that the vehicle is assembled in North America and has a high level of U.S./Canadian (USCan) content, or is loyal to and interested in a Big 3 vehicle, and the label information is not a consideration among buying factors.

Buying preferences: Dealers were asked to rate customer buying preferences and factors affecting their decisions in selecting a vehicle on a scale of 1 to 7 where 1 means "strongly disagree" and 7 means "strongly agree." The responses were distributed along a scale of zero (corresponding to 1) to 100 (corresponding to 7), to facilitate the comparison of scores, and we assumed a linear gradation of intermediate values between 17 through 83.

Dealers scored 21 (standard error of 1.9) in their responses to the following statement: "Customers consider U.S./Canadian parts content an important factor for selecting a vehicle." This low score indicates that dealers think that, generally, customers do not consider USCan content as a top priority in choosing a vehicle. Dealers scored an even lower 16 (standard error of 1.7) in response to whether they believe that customers consider the information on the parts content label when making a purchase decision. The results of this follow-up statement emphasize that dealers believe that USCan content plays an even smaller role when customers are ready to buy a vehicle.

Big 3 dealers rated customer consideration of USCan parts content an important factor for selecting a vehicle higher (score of 23) than did foreign-based dealers (score of 15), which is expected. However, both Big 3 and foreign dealers scored the same, at 16-17 in response to the customer's consideration of the label information when making a purchase decision, which supports the finding that in the customer's final analysis, the label is a relatively unimportant factor when the time comes to purchase from either a Big 3 or a foreign-based dealer.

Dealers were asked to rate on a scale from 1 (strongly disagree) to 7 (strongly agree) the statements: "Customers show a preference in buying American" and "Customers show a preference in buying foreign." The responses were distributed the same way as the data above. Dealers scored each of these statements in the mid- to upper 30's (each with a standard error of about 2.4).

However, Big 3 dealers scored much higher (score of 48, standard error of 3.0) in response to the statement about preference in buying American, compared to customer preferences in buying foreign (score of 16, standard error of 3.3), which is reasonable. Dealers with foreign-based franchises roughly paralleled a preference for foreign vehicles (score of 43, standard error of 5.7) compared to preferences in buying American (score of 28, standard error of 2.6); again, this appears reasonable. It is evident that Big 3 dealers strongly believe that customers are particularly interested in and make a point of buying the vehicles they sell; at the same time, dealers of Big 3 vehicles know that some customers are also interested in imported vehicles. Correspondingly, dealers of vehicles manufactured by foreign-based companies firmly believe that their customers strongly want to purchase imported vehicles. There appears to be a definite sense of customer loyalty to both North American and overseas-built vehicles.

Dealers scored very high (score of 89, standard error of 1.9) in their opinion that customers are more interested in the purchasing or leasing price of an automobile than the information on the parts content label. Big 3 dealers scored this question high (score of 88, standard error of 2.5), and foreign-based dealers scored even higher (score of 93, standard error of 2.8). The survey underscores that price greatly predominates issues and concerns regarding USCan content when consumers consider both factors.

Label influence: Dealers were asked which aspect of the AALA label customers are most interested in. Final assembly point was clearly the most important component of the parts content label for consumers, according to dealers (29 percent). Sixteen percent of dealers said USCan parts content was the most important aspect, and 3 percent each referred to major sources of non-USCan parts content, and country of origin of engine parts. It appears that dealers think that customers are interested mainly in the primary information on the label, without additional details, perhaps concluding that the location of assembly is the most important piece of information, and the most critical to the vehicle's intrinsic and monetary value.

Customers have not expressed concern because the numerical parts content score combines U.S. and Canadian parts, according to 84 percent of dealers. Only 7 percent of dealers reported that customers were concerned about combining the countries. Dealers do not consider this a significant issue.

Customers have never declined to purchase a vehicle as a result of the kind of information provided on the parts content label, according to 82 percent of dealers. Nine percent of dealers (16 dealers) reported that at least one of their customers has declined to purchase because of the information.

Dealers were asked whether customers have ever decided to purchase a vehicle as a result of the kind of information provided on the parts content label, and 75 percent reported no, while 5 percent (nine dealers) indicated yes, at least one customer has purchased the vehicle based on the label information.

It appears from the responses that the information on the parts content label has little influence on most customers' purchase decision-making. Dealers believe that there are stronger considerations that customers take into account, particularly price, when purchasing a vehicle. Nevertheless, dealers acknowledge that occasionally a customer decides to buy a vehicle after taking the label information into account.

8.5 Sales staff knowledge, training and presentation of the labels

Awareness and understanding: The survey polled the extent to which sales staff is aware of the label, understands the label, and can explain the information to customers, on a scale of 1 to 7, adjusted to a zero to 100 scale, as explained above. Dealers (including Big 3 and foreign-based) rated their sales staff fairly high, at about 70 for all of the above; except that foreign dealers rated their staff slightly higher in awareness (score of 79) and understanding the label (score of 74). Since foreign manufacturers have raised concerns about a number of issues, including how the USCan content score is calculated, distinguishing between countries of production within a particular carline, the definition of final assembly, and have expressed additional comments from the inception of the regulation, they are more likely concerned that their dealers and sales staff should be knowledgeable about and prepared to explain the label. Foreign-based manufacturers probably make a stronger effort to achieve this result.

Dealers (including foreign-based and Big 3) rate their staff at about 48 in keeping updated on parts content information, which is rather high considering the modifications in the intricacies and complexities of the regulation during the past few years.

Sales staff training: Although dealers indicated optimistically that their staff is informed about the information on the label, it does not appear that many dealers offer various types of training to sales staff, as shown below:

TRAINING	PERCENT OF DEALERS OFFERING TRAINING
Sales meeting	44
Brochure	12
Seminar	2
Workshop	2
Other	2
No training	32
Don't know/no response	6

In fact, 51 percent of dealers said that manufacturers provided them with no guidelines or materials for training sales staff to explain the information on the parts content label. Only 23 percent of dealers indicated that manufacturers had supplied training assistance.

Similarly, manufacturers are lacking in providing any guidelines or recommendations for using the parts content information label as a selling point. Sixty percent of dealers said they have not been provided with materials, and only 15 percent indicated yes.

Label use in sales presentation: Dealers were asked under what circumstances are sales staff told to explain parts content information labels to customers. One-half of the dealers reported that sales staff give the information to customers only when they inquire about it. Only 2 percent (five dealers) said that sales staff give the information to customers without being asked. Forty-four percent of dealers indicated that sales staff are not given any guidelines as to when to give customers information. The responses indicate that virtually none of the sales staff voluntarily offers the label information to customers.

However, all of the dealers, (including Big 3 and foreign-based) scored their sales staff at 20 for pointing out the parts content label to customers. Interestingly, foreign-based dealers scored lower (score of 9) than Big 3 dealers (score of 12) for sales staff making the parts content information label an important part of the sales presentation, although staff in foreign-based dealers are more aware and have greater understanding than their counterparts in the Big 3 dealerships.

All dealers (including Big 3 and foreign-based) scored "labels are used as a sales tool" and "labels are not used in the sales process" at 14 and about 63, respectively, emphasizing that the labels generally do not play an active role in the sales process.

If, however, there is particular information that may be of interest to the customer and would advance a sale, the survey shows that this information is offered to the customer. For example, sales staff at Big 3 dealers are more likely to furnish customers with the percentage of USCan parts content (score of 18) than sales staff at foreign-based dealers (score of 11). Interestingly, both Big 3 and foreign-based dealers' sales staff nearly equally (score of 32 compared to 28) are likely to use the labels in sales presentation if the vehicle was assembled in the United States. It appears that foreign-based dealers' staff is sensitive to the "made in the U.S.A." issue in marketing and provides this information to customers at about the same competitive rate as the Big 3 sales staff.

Dealers generally did not believe that sales staff would likely use the label in a sales presentation if a high percentage of parts were manufactured outside of the United States, and scored their staff low at 16 on the scale of zero to 100. Big 3 dealers rated their staff lower, at 15, and foreign-based dealers rated their staff higher, at 20. The relative difference in Big 3 - foreign-based ratings seems reasonable, since Big 3 dealers' sales staff is unlikely to point out foreign parts content in a Big 3 vehicle, which may dissuade a customer, while a sales presentation at a foreign-based dealer may benefit from emphasizing high content from overseas countries esteemed for quality engineering.

Interestingly, more Big 3 dealers (score of 40) than foreign-based dealers (score of 27) thought that parts content information can be harmful to making a sale. Perhaps Big 3 dealers believe that consumers of Big 3 vehicles (who may have strong brand loyalty) would be more discouraged from a sale if the label indicates non-USCan assembly or substantial non-USCan parts content.

Also, Big 3 dealers scored lower (15) compared to foreign-based dealers (score of 21) when asked if their sales staff is likely to point out the label if the U.S. is country of origin of the transmission. This may indicate that regardless of the information on the label (even if the information may be helpful to making a sale) the Big 3 sales staff is unlikely to point out the label. Conversely, the foreign-based dealer may make more of an effort to inform the customer.

Assembly/content information apart from the AALA label: The last series of questions had to do with how much information about the vehicle the sales staff provides apart from the label. In nearly all cases, the foreign-based dealers believed that their sales staff provided more information than did the Big 3 dealers, which is concurrent with earlier results that the sales staff at foreign-based dealers has greater awareness and understanding of the label, is more likely to point out certain parts of the label, and does not believe that the information can be harmful to making a sale. For example, foreign-based dealers scored 47, and Big 3 dealers 35, with respect to whether the sales staff provides information apart from the label concerning the final assembly point of the vehicle. Also, foreign-based dealers scored 31 and 28, compared to a Big 3 score of 20 and 18, on whether the sales staff provides information apart from the label about the country of origin of the engine and transmission parts, respectively.

Regarding providing information apart from the label about percentages of USCan parts that comprise the vehicle, Big 3 dealers scored their sales staff at 23, while foreign-based dealers scored 14. Conversely, the scores for sales staff providing information apart from the label when the major sources are not the U.S. or Canada are almost reversed, with foreign dealers scoring their staff at 21, and Big 3 dealers scoring sales staff at 16, which is reasonable.

In general, these responses suggest that dealers do not frequently discuss country of origin as part of their sales presentation. One exception is that the country of final assembly, especially if it is the United States or Canada, is sometimes emphasized, using both the information on the label and apart from the label. There is less interest in parts than in the final assembly.

DISCUSSION OF FINDINGS

The macro-finding of the statistical analysis of sales data is that the introduction of American Automotive Labeling Act (AALA) labels in model year 1995 was not followed by a massive immediate or subsequent change in U.S./Canadian (USCan) parts content in new vehicles sold in the United States. In fact, it declined slightly, from an average of 70 percent in model year 1995 to 67.6 percent in model year 1998. Similarly, the percent of new vehicles sold in the United States that were assembled in the United States or Canada declined from 82 percent in model year 1994 to 80 percent in 1998 (Section 2.2).

One of the most important findings is that transplant vehicles substantially increased their proportion of USCan parts: from 47 percent in model year 1995 to 59 percent in 1998 (Section 2.4), with even larger increases by some manufacturers (Section 2.7). At first glance that could be a response to the consumer information on USCan parts content.

Nevertheless, this report hardly claims that the AALA labels caused all or even a large part of the increase. Nearly simultaneous with the AALA, a 1995 U.S.-Japan Agreement on Autos and Auto Parts was dedicated to increasing North American parts content in the transplant vehicles of the Japanese-based companies (Section 1.3). Even before the 1995 Agreement, in fact since the 1960's, a series of laws, regulations, international agreements and incentives had already spurred foreign-based manufacturers to transplant assembly and parts facilities to the U.S. (Section 1.2).

Under the circumstances, it is virtually impossible to quantify the relative effects of AALA, the 1995 Trade Agreement, and the earlier measures. The strong, explicit terms of the Agreement and the current near absence of consumer interest in the numerical scores of the AALA (Section 6.6) intuitively suggest that the Agreement has had more direct effect than the AALA labels. The fact that it takes lead-time to shift production and parts-sourcing suggests the pre-1995 measures could still have been influential in 1995-98. Moreover, only one of 21 manufacturers in our survey (and that company did not dramatically increase USCan content in 1995-98) stated that parts-content information labels influenced a shift in their production or parts facilities (Section 7.2). However, one benefit of the AALA labels has been that U.S. Government agencies use the numerical parts-content scores to monitor progress under the Agreement.

Section 2.3 shows the gain in USCan parts among transplants was offset by a loss among the Big 3, from 89 percent in model year 1995 to 84 percent in 1998. (Since the Big 3 account for a lot more sales than transplants, the net result is a decline of USCan content for the entire new-vehicle fleet.) But it appears that most of these non-USCan parts are coming from Mexico rather than overseas, consistent with the North American Free Trade Act (NAFTA). (In this context, Section 6.5 showed that consumers are often unaware that the numerical score on the AALA label includes Canadian parts but excludes Mexican parts: 35 percent of those who had read the label knew it included Canadian parts, while 23 percent mistakenly thought it also included Mexican parts.)

The trend in import dependence in motor vehicles and parts is no more, and if anything slightly less than the trends in other consumer goods such as refrigerators, carpets, cosmetics, furniture, etc. In 1992-98 there was unprecedented prosperity and a strong dollar in the United States while several other large countries experienced recessions or reduced buying power. That by itself would tend to increase net imports for all types of consumer goods. Chapter 4 and especially Table 4-4 show that even though the AALA, the U.S.-Japan Agreement, etc. did not massively reverse an economy-wide trend, the growth in import dependence for motor vehicles and parts was just a bit smaller than the average for the other consumer goods.

The regression analyses of Chapter 3 showed that make-models that increased USCan content from one year to the next more often than not increased their sales. Regression results do not, by themselves, establish a causal relationship between USCan content and sales. Given that few if any consumers are using the numerical USCan content scores for "comparison shopping," it is most unlikely that increased USCan content "caused" the sales growth. Nevertheless, make-models that increased USCan content have not been suffering in the market place.

The macro-finding of the consumer survey is that the great majority of the public knows little or nothing about the labels. Among 425 new car **purchasers** - people who had acquired a new vehicle with all its labels and stickers within the past six months - only 23 percent were aware of the existence of the AALA label on new vehicles, only 16 percent had seen it, and only 7 percent had read it at the dealership[1]. Over half of those who read the label said they were influenced by it, but they were primarily swayed by its country-of-assembly information. Not a single person explicitly stated they had used AALA's numerical parts-content score to comparison-shop among make-models according to their percentages of USCan parts, or that they were influenced by the country of origin of the engine or the transmission (Sections 6.4 and 6.6).

The two macro-findings of this report are quite consistent with one another: if few people read the labels, it is understandable that they would not have a massive net impact on sales. However, the macro survey findings do not reveal that rather large groups of consumers think the country of origin of vehicles and parts is important and could potentially derive more value from the labels than they do today.

Although "only" 7 percent of new-vehicle purchasers are currently reading the labels at dealerships, given new-vehicle sales of 15 million per year, that implies slightly over a million new-vehicle buyers are reading the labels each year: a not insubstantial group. In the survey, about a third of the people who read the label explicitly stated they were moderately or strongly influenced by its information on the vehicle's country of assembly (Sections 6.4 and 6.6). In other words, the AALA is already benefitting at least 300,000 consumers per year by furnishing easily readable and influential country-of-assembly information. (Country-of-assembly information was available to consumers before the AALA, but not necessarily in a standardized and conveniently

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[1]In other words, 23 percent of the 425 survey participants knew of the existence of the label; 16 percent of the 425, and they are a subset of the first group, not only knew the label existed but had actually seen a label somewhere; and 7 percent of the 425, and they are a subset of the second (and the first) group, had seen and read the label while at the dealership.

accessible form like the AALA labels.) Nevertheless, the current effect of the labels in general, and their numerical parts-content scores in particular, is limited because they are not well known to consumers, especially those who care about in what country goods are produced.

Our survey allowed consumers to rank the importance of various factors in their selection of a new vehicle. Table 6-1 shows that the average new-car purchaser ranked "made in the U.S. or Canada" less important than most of the other attributes that people typically consider when buying a vehicle (reliability, safety, price, etc.). But that includes buyers of vehicles imported from overseas, who obviously consider "made in the U.S. or Canada" of little or no importance. People who bought Big 3 vehicles, over 70 percent of the new-vehicle market, attached somewhat more value to a vehicle and/or its parts being made in the U.S. or Canada. They considered it about as important as the vehicle's optional equipment, fuel economy, cargo capacity and the dealer's reputation: a solid member of the "second tier" of selection factors (the "first tier" being reliability, drive quality, safety, manufacturer reputation, price, styling and size).

Furthermore, the survey identified a considerable subgroup of consumers that staunchly believes in "buying American." One-sixth of the survey participants were in that group. That proportion would extrapolate to 2,500,000 new-vehicle sales per year. They rate it critically important that vehicles be made in the U.S. or Canada and, more generally, they always try to "buy American" when they go to a store. Their actions square with their values. In our survey, 100 percent of them bought vehicles made in North America: 96 percent bought Big 3 vehicles assembled in the United States, Canada or Mexico and 4 percent bought transplants assembled in the U.S.

Conceptually, a group that cares so deeply ought to be especially responsive to the AALA labels. But they are currently no more cognizant of the labels than the average consumer: 20 percent of them had heard of the label, 11 percent had seen it and 9 percent had read it at the dealership. Rather than perusing the numerical USCan content scores and comparison-shopping for the highest percentages of USCan content, they mostly feel they have "bought American" merely by acquiring any Big 3 vehicle assembled in North America.

If the staunch "buy American" consumers or other groups of consumers were more keenly aware of the labels - e.g., if they had convenient access to tabular listings of the USCan content of make-models in each vehicle class - they might conceivably be more likely to use this information as a factor in selecting vehicles.

Another sign that the AALA labels could have more impact if consumers were better informed about them is that 56 percent of our survey participants said, after the interviewer had explained the label to them, that it would influence their future vehicle purchases - in contrast to the just 5 percent who said the label had influenced their recent purchase (Section 6.6). This promising response is somewhat vague: consumers did not specify exactly how they would be influenced. Nevertheless, it should not be dismissed as merely "people trying to please the interviewer" because respondents were quite candid on the other parts of the interview.

But at this time no organization, government or private, makes a sustained effort to inform and educate the consumer about the AALA labels (nor does the AALA law mandate any organization to make such an effort). That stands in contrast, for example, to NHTSA's crash test ratings. The agency not only disseminates them directly to the public through its web site[2] and brochures, but also provides them regularly to the press and the safety community, where they are extensively published in magazines such as *Consumer Reports*, insurance companies' customer gazettes, and newspaper articles. It also contrasts with fuel economy (CAFE) ratings. They may be viewed at a Federal web site[3] in an easy-to-understand format: ranking the fuel economy of each make-model within the various vehicle classes. At least in past years, they were also widely printed in newspapers and magazines in that format.

NHTSA could study the potential impacts and appropriate media for expanding public information and education about the labels in general and the numerical USCan parts-content scores in particular. A basic approach would be to display the AALA label information at the NHTSA web site, listing make-models in each vehicle classes by percent USCan content. Other strategies could include a more extensive media outreach - e.g., in cooperation with organizations that have an interest in this issue, or via media widely read by demographic groups that care about the issue. Of course, there is no guarantee that making consumers more aware of the labels would necessarily influence many of them to use the information in their purchasing decisions (notwithstanding even that 56 percent of the consumers in our survey said they would be influenced in the future). It might be appropriate to conduct preliminary market research (e.g., focus groups) on that question before attempting any extensive outreach program.

The manufacturer and dealer surveys showed the auto industry thinks customers have only a limited awareness of the labels, at best a modest general interest in where vehicles are assembled and little or no specific interest in parts content. Given those perceptions, manufacturers are unlikely to expound on parts content to customers, advertise make-models' USCan content, or compete on the basis of USCan content - in contrast to safety and fuel economy, where they have done all of these things, at least to some extent. The manufacturers' attitudes cannot be expected to change unless they witness a major increase of consumer awareness and interest in the labels, and not necessarily even then.

In summary, this evaluation suggests that the AALA so far has had two definite and one doubtful impact. One definite impact is that a substantial proportion of the consumers who read the AALA labels at a dealership find them convenient and influential for identifying in what country a vehicle was assembled. Also, definitely, Federal agencies have used the parts content scores for monitoring progress under the U.S.-Japan Agreement on Autos and Auto Parts. The doubtful impact is that the labels may have contributed to the increase of USCan content in transplant vehicles during 1995-98: while there is no doubt that USCan content increased substantially, it is uncertain to what extent, if any, the labels contributed to the increase - given that the U.S.-Japan Agreement on Autos and Auto Parts, as well as earlier measures, intuitively seem to have been quite a bit more influential.

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[2]www.nhtsa.dot.gov/cars/testing/ncap

[3]www.fueleconomy.gov jointly maintained by the Department of Energy and the Environmental Protection Agency.

The two major shortcomings of the AALA at this time are: (1) The overwhelming majority of consumers are completely unaware of the existence of the AALA labels. (2) Even those who are aware of the labels hardly ever use the numerical parts-content scores for comparison shopping among make-models; the information about engines and transmissions is also rarely used.

The following alternatives might be considered for enhancing the current impact of the AALA, or at least redressing its present shortcomings and burdens:

(1) Expanded public information and education: Explore ways to disseminate the AALA information more extensively to consumers. Conduct market research (e.g., focus groups) to diagnose if any of these strategies are likely to increase consumer awareness or affect their purchase decisions. Possible strategies could include placing the AALA information on NHTSA's web site, with make-models in each vehicle class listed by percent USCan content; brochures; and/or national media outreach.

(2) Leave the program unchanged: The program would continue to supply a modest proportion of consumers with country-of-assembly information they find useful. If the numerical USCan content scores have had any influence on manufacturers to date, that influence could continue. However, it would be unreasonable to expect any large increase in consumer awareness and use of the labels.

(3) Modify the AALA to require only country-of-assembly information (or repeal AALA): The evaluation indicates that country-of-assembly is currently the only information on the AALA label widely used by consumers. That is unlikely to change in the absence of a strong public information and education program. Congress may wish to delete the numerical parts-content score and the information on the engine and transmission from the AALA. That would basically eliminate the cost and record-keeping burden of the AALA. Or, Congress could simply repeal the AALA since country-of-assembly information can be obtained elsewhere. This alternative risks losing any impact the numerical score may be having on manufacturers today, and any potential impact it could have if it were more widely known to consumers.

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APPENDIX A

U.S./CANADIAN CONTENT, REGISTRATION, PRICE AND ASSEMBLY DATA FOR CARS AND LIGHT TRUCKS

MM2 & CG	=	8-digit numerical make-model code used in NHTSA evaluation reports
MMNAME	=	make-model name (abbreviated)
REGS94	=	VIN-model-year 1994 registrations for this make-model, based on 1993-96 Polk new-vehicle registration files (REGS95 - REGS98 are similarly defined) - or - manufacturer-supplied statistics on model-year production for sale in the United States
PLOW94	=	lowest base retail (sticker) price of this make-model in model year 1994 (PLOW95 - PLOW98 are similarly defined)
ASUC94	=	percent of model year 94 vehicles of this make-model sold in the United States that were assembled in the United States or Canada (ASUC95 - ASUC98 are similarly defined)
USCAN95	=	percent U.S./Canadian parts content in model year 1995 for this make-model, as shown on the AALA label and reported to NHTSA by the manufacturer (USCAN96 - USCAN98 are similarly defined)

MM2	CG	MNAME	REGS94	PLOW94	ASUC94	REGS95	PLOW95	USCAN95	ASUC95	REGS96	PLOW96	USCAN96	ASUC96	REGS97	PLOW97	USCAN97	ASUC97	REGS98	PLOW98	USCAN98	ASUC98
616	618	Chry LeBa	62967	16551	87	35743	17469	84	100	0	.	.	.	0	.	.	.	0	.	.	.
641	625	Chry Conc	69902	19896	100	51925	20550	94	100	49896	19455	89	100	50911	20985	87	100	46064	21855	85	100
642	625	Chry NewY	97408	25541	100	48964	25596	94	100	38105	27300	92	100	36473	30850	87	100	0	.	.	.
643	5218	Chry Sebr	0	.	.	20529	15434	70	100	32349	16441	70	100	33046	17075	61	100	34668	17475	68	100
643	5220	Chry SeCV	0	.	.	0	.	.	.	47528	19460	50	0	55749	20685	45	0	50337	21110	40	0
644	626	Chry Cirr	0	.	.	61552	17435	78	100	43399	17560	75	100	27827	18695	73	100	37089	19995	69	100
713	642	Dodg Vipe	2046	54500	100	1269	56000	96	100	1561	58600	96	100	1367	66700	96	100	874	64700	89	100
717	620	Dodg Shad	89227	8806	96	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
719	622	Dodg Spir	68328	13649	42	24587	14323	81	46	0	.	.	.	0	.	.	.	0	.	.	.
720	627	Dodg Neon	0	.	.	203120	9500	92	83	131441	9495	80	81	115256	11300	77	83	129323	11600	71	84
734	5216	Dodg Colt	5162	9319	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
739	5213	Dodg Stea	7890	21145	0	4380	23236	5	0	349	24464	5	0	0	.	.	.	0	.	.	.
741	625	Dodg Intr	127910	17690	100	150233	17974	94	100	144815	18445	89	100	150553	19995	88	100	69376	20235	86	100
742	5218	Dodg Aven	0	.	.	32965	13341	72	100	38789	14040	72	100	32576	15155	61	100	26153	15720	71	100
743	626	Dodg Stra	0	.	.	47588	13965	84	100	99242	14460	77	100	96710	15525	77	100	105806	15375	75	100
917	620	Plym Sund	65473	8806	96	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
919	622	Plym Accl	71541	13649	46	23742	14323	72	46	0	.	.	.	0	.	.	.	0	.	.	.
920	627	Plym Neon	0	.	.	173062	9500	92	82	103242	9495	80	81	82691	11300	74	82	86435	11600	71	81
934	5216	Plym Colt	3864	9319	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
937	5212	Plym Lasr	5115	11542	100	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
938	626	Plym Brez	0	.	.	0	.	.	.	46556	14060	87	100	66644	15360	83	100	66612	15210	83	100
944	5214	Plym Vist	2519	13144	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
1034	5217	Eagl Summ	11432	9319	0	11491	9836	5	0	891	10090	5	0	0	.	.	.	0	.	.	.
1037	5212	Eagl Talo	21192	11892	100	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
1037	5219	Eagl Talo	0	.	.	34162	14460	70	100	11476	14059	70	100	9810	14594	56	100	4267	15040	73	100
1041	625	Eagl Visi	21960	19747	100	24996	19697	94	100	12723	19245	90	100	5746	20855	88	100	0	.	.	.
1203	1238	Ford Must	122564	13365	100	162508	14530	90	100	125386	15180	90	100	99776	15880	80	100	169426	16675	90	100
1204	1237	Ford Thun	120010	16930	100	114353	17400	90	100	84606	17485	90	100	73371	18395	80	100	0	.	.	.
1213	4117	Ford Esco	283903	9135	78	361603	9680	80	72	125057	10065	85	52	323508	11430	80	88	333571	11845	70	87
1215	1234	Ford Temp	142643	10885	100	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
1216	1228	Ford CV	100487	19350	100	64247	20160	80	100	107822	20955	85	100	123136	22180	80	100	84334	21740	85	100
1217	1235	Ford Taur	345840	16240	100	396375	17585	90	100	0	.	.	.	0	.	.	.	0	.	.	.
1217	1240	Ford Taur	0	.	.	0	.	.	.	393302	17995	85	100	398147	18545	85	100	332750	18995	85	100
1218	4121	Ford Prob	84902	13755	100	57819	14180	65	100	29831	13930	60	100	16642	14755	65	100	0	.	.	.
1235	1239	Ford Ctur	0	.	.	177602	13310	80	82	167287	13785	80	82	79764	13995	75	90	216130	14995	75	93
1236	6403	Ford Aspi	37465	8240	0	61733	8440	5	0	30011	8790	5	0	37012	9530	5	0	0	.	.	.
1301	1230	Linc ToCa	112324	34750	100	107009	36400	90	100	90343	36910	90	100	104419	37950	80	100	82457	38700	85	100

MM2	CG	MNAME	REGS94	PLOW94	ASUC94	REGS95	PLOW95	USCAN95	ASUC95	REGS96	PLOW96	USCAN96	ASUC96	REGS97	PLOW97	USCAN97	ASUC97	REGS98	PLOW98	USCAN98	ASUC98
1302	1237	Linc MV8	26781	38050	100	19960	38800	90	100	13282	39650	95	100	16298	37950	80	100	14243	38500	90	100
1305	1236	Linc Con	49619	33750	100	32589	40750	90	100	27740	41800	95	100	32124	37950	80	100	38447	38600	90	100
1404	1237	Merc Coug	70868	16360	100	60001	16860	90	100	38700	17430	90	100	35195	18340	80	100	0	.	.	.
1415	1234	Merc Topz	50462	11420	100	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
1416	1228	Merc GrdM	94740	20330	100	93760	21270	80	100	94678	21975	85	100	127549	23100	80	100	87302	22695	85	100
1417	1235	Merc Sabl	103336	17840	100	102037	18210	90	100	0	.	.	.	0	.	.	.	0	.	.	.
1417	1240	Merc Sabl	0	.	.	0	.	.	.	123077	18995	85	100	113989	20105	85	100	91332	20075	90	100
1431	6501	Merc Capr	3657	13190	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
1436	4117	Merc Trac	45937	10350	0	63413	11380	75	0	13177	11755	75	14	65601	11560	80	100	35508	11920	80	100
1437	1239	Merc Myst	0	.	.	66161	13855	80	83	51587	14330	80	87	23285	14495	75	85	59354	16925	75	90
1802	1852	Buic LeSa	148896	21080	100	163195	20724	95	100	51980	21380	95	100	210773	22620	95	100	142547	23070	86	100
1803	1852	Buic PkAv	60930	27164	100	60333	27236	95	100	46794	28205	95	100	58919	30660	95	100	61444	31340	90	100
1804	1839	Buic Rdma	34753	24184	100	28183	24390	92	100	21242	25560	92	100	0	.	.	.	0	.	.	.
1805	1865	Buic Rive	0	.	.	39368	28195	96	100	17262	30010	95	100	18041	30775	90	100	10344	33165	87	100
1807	1871	Buic Cent	0	.	.	0	.	.	.	0	.	.	.	53283	18425	91	100	127650	18965	86	100
1817	1850	Buic Cent	130050	15800	79	109780	15815	85	100	91975	16720	82	100	0	.	.	.	0	.	.	.
1818	1854	Buic Skyl	56443	13734	100	52554	14570	91	100	41623	15495	92	100	57385	16495	90	100	18856	16755	80	100
1820	1859	Buic Rega	78078	18324	100	89155	18690	90	100	99729	19445	95	100	0	.	.	.	0	.	.	.
1820	1871	Buic Rega	0	.	.	0	.	.	.	0	.	.	.	21310	21095	91	100	69306	21595	86	100
1903	1864	Cadi DeVi	113558	32990	100	105062	34900	96	100	107213	35995	95	100	94833	37660	92	100	103725	38360	86	100
1904	1842	Cadi Fltw	23636	33990	100	13491	35595	95	100	8346	36995	91	100	0	.	.	.	0	.	.	.
1905	1855	Cadi Eldr	23772	37690	100	24374	38220	95	100	19909	39595	95	100	19197	38660	92	100	17780	39160	86	100
1914	1863	Cadi Sevi	41315	41430	100	35481	41935	96	100	33357	42995	95	100	37023	40660	92	100	27287	43160	86	100
1917	6202	Cadi Cat	0	.	.	0	.	.	.	0	.	.	.	25917	30635	3	0	27113	30635	4	0
2002	1839	Chev Capr	87073	19153	100	55459	20310	92	100	60201	19905	92	100	0	.	.	.	0	.	.	.
2004	1851	Chev Corv	21835	36285	100	19500	36785	90	100	20645	37225	87	100	0	.	.	.	0	.	.	.
2004	1872	Chev Corv	0	.	.	0	.	.	.	0	.	.	.	8875	38060	85	100	28316	38560	82	100
2009	1849	Chev Cama	119906	13499	100	121609	14495	91	100	60733	14990	86	100	54419	16740	91	100	47521	17150	86	100
2016	1848	Chev Cava	263607	8970	100	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
2016	1866	Chev Cava	0	.	.	152240	10060	90	94	267859	10500	90	90	314282	11480	90	96	267825	12110	81	94
2019	1856	Chev CoBe	198808	12585	100	212971	13095	91	100	189365	13490	95	100	0	.	.	.	0	.	.	.
2020	1859	Chev Lumi	82574	15305	100	241259	15760	90	100	222977	16355	95	100	233305	17495	91	100	184357	17945	86	100
2032	4930	Chev GeoP	107461	11070	100	103537	11675	50	100	72797	12495	55	100	62536	13245	51	100	44568	12563	62	100
2034	5304	Chev GeoM	92231	7295	100	75280	8085	45	100	83892	8380	50	100	64536	8920	50	100	31866	9095	50	100
2036	1859	Chev MteC	0	.	.	92874	16770	90	100	80373	17255	95	100	72305	17995	91	100	66215	18495	86	100
2037	1868	Chev Mali	0	.	.	0	.	.	.	0	.	.	.	99735	15995	90	100	227888	16195	80	100
2102	1852	Olds 88	74472	19420	100	70104	20815	95	100	53637	20405	95	100	65639	23200	95	100	63503	23400	86	100

MM2	CG	MMNAME	REGS94	PLOW94	ASUC94	REGS95	PLOW95	USCAN95	ASUC95	REGS96	PLOW96	USCAN96	ASUC96	REGS97	PLOW97	USCAN97	ASUC97	REGS98	PLOW98	USCAN98	ASUC98
2103	1852	Olds 98	24824	24670	100	24083	26565	95	100	14303	28160	95	100	0	.	.	.	0	.	.	.
2117	1850	Olds Cier	135092	13670	100	131885	14865	85	100	123982	13955	82	100	0	.	.	.	0	.	.	.
2120	1859	Olds CtSp	110152	16670	100	103878	17665	90	100	73762	17455	95	100	52977	19500	91	100	0	.	.	.
2120	1868	Olds Cutl	0	.	.	0	.	.	.	0	.	.	.	18008	17850	90	100	51928	18325	80	100
2121	1854	Olds Achi	51903	13510	100	46474	13500	91	100	35486	13495	92	100	44059	15750	90	100	26933	18340	80	100
2122	1865	Olds Auro	0	.	.	45418	33065	96	100	22106	34360	95	100	25402	36400	90	100	23387	36825	87	100
2123	1871	Olds Intg	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	97299	21440	86	100
2202	1852	Pont Bonn	79854	20424	100	91314	20804	95	100	69095	21589	95	100	73500	22839	95	100	64509	23150	86	100
2209	1849	Pont Fire	45291	14099	100	50440	15104	91	100	30441	15614	86	100	30438	17699	91	100	31791	18540	86	100
2216	1848	Pont Sunf	92644	9904	100	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
2216	1866	Pont Sunf	0	.	.	51921	11074	90	96	95445	11504	90	87	104072	12559	90	95	88967	12995	81	94
2218	1854	Pont GrAm	224584	12514	100	261803	13104	91	100	205677	13499	92	100	209024	15259	90	100	101456	16395	80	100
2220	1859	Pont GdPr	133552	16254	100	131131	16634	90	100	76983	17089	95	100	0	.	.	.	0	.	.	.
2220	1869	Pont GdPr	0	.	.	0	.	.	.	0	.	.	.	142812	18769	91	100	125475	19345	86	100
2401	1862	Satu Satu	252622	9995	100	286999	9995	95	100	276895	10495	95	100	291437	10995	95	100	198831	11035	95	100
3040	3006	VW Jett	46976	13750	0	79094	13475	10	0	83448	14250	15	0	91340	15070	10	0	74146	15095	15	0
3042	3006	VW Golf	12255	12325	0	21032	12500	10	0	22507	13150	15	0	22563	13970	5	0	17809	13995	10	0
3043	3006	VW Cabr	0	.	.	8011	19975	10	0	5100	19975	10	0	9416	18425	5	0	12122	18475	10	0
3045	3006	VW Corr	194	25150	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
3046	3008	VW Pass	5081	23075	0	15338	20890	1	0	18465	18490	1	0	11408	19930	1	0	25650	21250	1	0
3047	3009	VW Betl	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	39030	15700	2	0
3236	3207	Audi 90	2912	27820	0	4356	25670	5	0	0	.	.	.	0	.	.	.	0	.	.	.
3237	3205	Audi 100	5962	35120	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
3240	3205	Audi A6	0	.	.	8369	30600	5	0	8834	32300	5	0	7519	33100	5	0	16691	34250	5	0
3241	3208	Audi Cabr	0	.	.	0	.	.	.	1238	36800	5	0	1188	35100	5	0	792	35100	5	0
3242	3205	Audi S6	0	.	.	1412	45270	5	0	0	.	.	.	0	.	.	.	0	.	.	.
3243	3207	Audi A4	0	.	.	0	.	.	.	15225	26500	5	0	16313	23490	5	0	28937	24290	5	0
3244	3209	Audi A8	0	.	.	0	.	.	.	0	.	.	.	2323	57400	5	0	1898	57900	5	0
3434	3414	BMW 3	48596	24675	0	64171	24975	5	12	39104	20560	5	13	50138	21960	5	0	48607	21960	5	0
3435	3412	BMW 5	22077	34900	0	34624	35300	5	0	0	.	.	.	0	.	.	.	0	.	.	.
3435	3418	BMW 5	0	.	.	0	.	.	.	0	.	.	.	40633	39470	5	0	35263	39470	5	0
3437	3410	BMW 7	9560	55950	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
3437	3415	BMW 7	0	.	.	17371	57900	2	0	5953	62490	2	0	17514	61420	2	0	18179	62070	5	0
3438	3413	BMW 8	653	68100	0	1190	69900	2	0	248	74400	2	0	781	76270	2	0	0	.	.	.
3439	3417	BMW Z3	0	.	.	0	.	.	.	11031	29995	40	100	20441	29995	40	100	16198	29995	40	100
3532	3526	Niss 240S	1379	23969	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
3532	3535	Niss 240S	0	.	.	24783	17749	5	0	7178	18359	5	0	3568	18829	5	0	1924	18849	5	0

MM2	CG	MNAME	REGS94	PLOW94	ASUC94	REGS95	PLOW95	USCAN95	ASUC95	REGS96	PLOW96	USCAN96	ASUC96	REGS97	PLOW97	USCAN97	ASUC97	REGS98	PLOW98	USCAN98	ASUC98
3534	3527	Niss 300Z	5175	33699	0	3494	35419	5	0	2583	37439	5	0	0	.	.	.	0	.	.	.
3539	3525	Niss Maxi	65469	22429	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
3539	3534	Niss Maxi	0	.	.	153698	19999	5	0	155793	20999	5	0	130847	21969	5	0	130862	21989	5	0
3543	3524	Niss Sent	225724	10199	81	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
3543	3536	Niss Sent	0	.	.	122790	10999	45	93	167637	11499	45	78	151582	11969	45	73	108801	11989	45	57
3547	3532	Niss Alti	143747	13999	100	166006	14969	40	100	92154	15649	40	100	178105	16319	45	100	151809	15480	55	100
3731	3723	Hond Civi	241027	9400	81	325294	9890	45	80	228874	10350	70	100	329770	10945	60	87	363820	11045	70	94
3732	3726	Hond Acco	380080	14130	82	315942	14940	50	85	371470	15100	65	100	372593	15495	60	96	399486	15495	75	99
3733	3717	Hond Prel	15515	18100	0	13561	19760	5	0	9544	19960	5	0	0	.	.	.	0	.	.	.
3733	3729	Hond Prel	0	.	.	0	.	.	.	0	.	.	.	16342	23595	5	0	15706	23695	0	0
3735	3725	Hond DelS	0	.	.	0	.	.	.	2993	15080	5	0	6719	15475	5	0	0	.	.	.
3931	3904	Jag XJS4	3556	51950	0	4975	53400	5	0	3201	61570	5	0	0	.	.	.	0	.	.	.
3931	3906	Jag XK8	0	.	.	0	.	.	.	0	.	.	.	8069	65480	5	0	5714	65480	5	0
3932	3903	Jag XJ6/8	7774	51750	0	8560	53450	5	0	7562	56320	5	0	7899	55330	5	0	11374	55330	5	0
3941	3904	Jag SV12	848	69950	0	411	73350	15	0	0	.	.	.	0	.	.	.	0	.	.	.
3942	3903	Jag Vand	2159	59400	0	3393	62200	5	0	0	.	.	.	0	.	.	.	0	.	.	.
3942	3905	Jag Vand	0	.	.	0	.	.	.	4589	64420	5	0	2536	60330	5	0	5284	60330	5	0
3952	3903	Jag XJ12	1436	73200	0	505	77250	10	0	0	.	.	.	0	.	.	.	0	.	.	.
3952	3905	Jag XJ12	0	.	.	0	.	.	.	493	79370	15	0	0	.	.	.	0	.	.	.
3962	3903	Jag XJR	0	.	.	656	65000	20	0	487	66270	15	0	455	67980	10	0	1494	67980	5	0
4134	4122	Mazd RX7	3322	36500	0	440	37500	2	0	0	.	.	.	0	.	.	.	0	.	.	.
4135	4117	Mazd Prot	98726	9495	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
4135	4123	Mazd Prot	0	.	.	76330	12295	4	0	57095	11695	4	0	53128	12595	4	0	55240	12595	5	0
4137	4121	Mazd 626	82009	14495	100	104857	14995	65	100	76902	15495	65	100	80564	16145	65	100	0	.	.	.
4137	4125	Mazd 626	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	87374	16000	65	100
4143	4120	Mazd 929	9642	32200	0	3944	35795	2	0	0	.	.	.	0	.	.	.	0	.	.	.
4144	4121	Mazd MX6	21369	17925	100	17619	18895	60	100	7355	19595	60	100	1224	20645	65	100	0	.	.	.
4145	4118	Mazd Miat	19903	17000	0	19500	17795	7	0	18790	18450	5	0	18511	19575	5	0	0	.	.	.
4146	4119	Mazd MX3	14989	13925	0	8247	14695	3	0	0	.	.	.	0	.	.	.	0	.	.	.
4147	4124	Mazd Mill	0	.	.	45517	27325	4	0	11448	27995	4	0	16803	29445	4	0	19596	29445	4	0
4231	4214	Merz E	23567	40000	0	30852	41000	2	0	0	.	.	.	0	.	.	.	0	.	.	.
4231	4222	Merz E	0	.	.	0	.	.	.	18184	39900	2	0	49316	40495	0	0	41968	42395	0	0
4233	4217	Merz SL	5433	85200	0	8209	78300	2	0	5410	78300	2	0	7009	80195	0	0	8161	80495	0	0
4237	4218	Merz S	11318	70600	0	25421	62700	2	0	12826	62700	2	0	16095	63895	0	0	8874	65295	0	0
4242	4220	Merz C	16553	29900	0	31987	30950	2	0	23465	29900	2	0	28021	31045	0	0	39398	31045	0	0
4245	4223	Merz SLK	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	12523	40295	0	0
4540	4506	Pors Boxt	0	.	.	0	.	.	.	0	.	.	.	5337	40745	0	0	7156	41765	0	0

MM2	CG	MMNAME	REGS94	PLOW94	ASUC94	REGS95	PLOW95	USCAN95	ASUC95	REGS96	PLOW96	USCAN96	ASUC96	REGS97	PLOW97	USCAN97	ASUC97	REGS98	PLOW98	USCAN98	ASUC98
4550	4505	Pors	2886	39950	0	7631	39950	0	0	6922	63750	0	0	6128	64515	0	0	2427	65795	0	0
4731	4706	Saab 900	15439	21990	0	24310	23375	1	0	19810	23995	1	0	22641	25995	2	0	11769	26050	2	0
4734	4705	Saab 9000	5307	28725	0	7344	29845	2	0	3284	31395	1	0	5316	32220	1	0	1305	39130	1	0
4831	4806	Suba Loya	3307	13553	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
4834	4809	Suba Lega	31207	13999	94	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
4834	4812	Suba Lega	0	.	.	76359	14364	35	100	79061	16495	40	100	91256	17390	40	100	89813	17390	40	100
4836	4808	Suba Just	2368	7749	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
4837	4810	Suba SVX	2396	23900	0	1125	26800	0	0	823	29995	0	0	361	31120	0	0	0	.	.	.
4838	4811	Suba Impr	9416	11200	0	29553	11850	1	0	16200	13495	1	0	26202	14290	1	0	19252	16390	1	0
4932	4930	Toyo Coro	202124	12098	72	209630	12498	45	83	205798	12728	50	98	217632	13418	50	100	222361	12328	55	100
4933	4933	Toyo Celi	35380	16168	0	25494	17228	5	0	10199	16958	10	0	12824	17598	10	0	3315	20531	5	0
4934	4931	Toyo Supr	3424	36900	0	1542	37600	5	0	268	38600	5	0	1602	29920	5	0	670	31498	5	0
4938	4925	Toyo Terc	94697	8958	0	82300	10198	10	0	52826	10348	10	0	49527	11118	10	0	11207	13110	10	0
4940	4928	Toyo Camr	321316	16428	65	311661	16128	55	67	342190	16468	55	72	0	.	.	.	0	.	.	.
4940	4936	Toyo Camr	0	.	.	0	.	.	.	0	.	.	.	363825	16868	55	83	401404	17358	55	66
4941	4927	Toyo MR2	599	22538	0	300	24038	0	0	0	.	.	.	0	.	.	.	0	.	.	.
4942	4925	Toyo Pase	12245	12838	0	4116	13698	5	0	6580	13038	5	0	3116	13668	10	0	0	.	.	.
4943	4935	Toyo Aval	0	.	.	59557	22988	60	100	65038	23418	60	100	73778	24028	55	100	75693	24828	60	100
5140	5105	Volv 900	35149	22900	17	27520	23360	2	17	16377	33960	2	0	19206	34875	2	0	0	.	.	.
5142	5106	Volv 850	44827	24680	0	60649	24935	2	0	59615	26300	2	10	42255	27560	2	10	0	.	.	.
5143	5106	Volv 70	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	89463	27560	2	11
5144	5105	Volv 90	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	12825	34875	0	0
5234	5218	Mits Gala	56193	13600	100	80321	14349	46	93	54462	14920	45	93	49792	15840	45	100	29380	16100	47	100
5235	5217	Mits Mira	33486	9179	0	61912	9799	5	0	31933	10440	5	0	58218	10990	5	0	41904	11250	5	0
5236	5502	Mits Prec	800	7290	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
5237	5212	Mits Ecli	40175	12099	100	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
5237	5219	Mits Ecli	0	.	.	64322	14359	72	100	50651	14970	71	100	77556	14250	56	100	55438	16160	72	100
5239	5213	Mits 3000	15678	27450	0	14987	28450	5	0	4400	30690	5	0	6258	27520	12	0	4633	28240	6	0
5240	5215	Mits Diam	19332	25750	0	13045	28250	5	0	600	27540	5	0	28208	26370	5	0	6584	28120	5	0
5244	5214	Mits LRV	4580	13149	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
5245	5215	Mits Expo	7115	15839	0	5652	15839	5	0	0	.	.	.	0	.	.	.	0	.	.	.
5332	5305	Suzu Estm	0	.	.	3659	11599	5	0	5244	11599	5	0	6200	12319	5	0	14339	12429	5	0
5334	5304	Suzu Swif	8724	7659	34	4702	8699	45	100	2086	8999	50	100	1422	9350	50	100	2554	9479	50	100
5431	3723	Acur Inte	80611	14820	0	72276	15700	5	0	48231	16100	5	0	30046	16535	5	0	35548	16635	0	0
5432	3721	Acur Lege	33662	33800	0	22758	36100	5	0	0	.	.	.	0	.	.	.	0	.	.	.
5433	3719	Acur NSX	496	72500	0	721	81000	0	0	472	79500	0	0	336	84725	0	0	243	84725	0	0
5434	3724	Acur Vigr	9557	26350	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.

MM2	CG	MNAME	REGS94	PLOW94	ASUC94	REGS95	PLOW95	USCAN95	ASUC95	REGS96	PLOW96	USCAN96	ASUC96	REGS97	PLOW97	USCAN97	ASUC97	REGS98	PLOW98	USCAN98	ASUC98
5435	3727	Acur TL	0	.	.	425	27900	0	0	37629	27900	0	0	21174	28885	0	0	18215	31135	0	0
5436	3728	Acur RL	0	.	.	0	.	.	.	14969	41000	5	0	16188	41435	0	0	13963	41635	5	0
5437	3726	Acur CL	0	.	.	0	.	.	.	0	.	.	.	44375	22545	65	100	25210	22745	70	100
5532	5502	Hyun Excl	55257	7290	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
5533	5501	Hyun Sona	2008	13299	100	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
5533	5505	Hyun Sona	0	.	.	32526	13599	10	0	9694	13999	5	0	18035	15164	2	0	16288	15184	1	0
5534	5502	Hyun Scou	12647	9799	0	8271	9995	0	0	0	.	.	.	0	.	.	.	0	.	.	.
5535	5503	Hyun Elan	41173	9799	0	51694	10299	5	0	0	.	.	.	0	.	.	.	0	.	.	.
5535	5506	Hyun Elan	0	.	.	0	.	.	.	28040	10899	5	0	40990	11514	1	0	35463	11934	1	0
5536	5504	Hyun Acct	0	.	.	50423	8079	10	0	46691	8285	5	0	38024	9014	1	0	31860	9534	1	0
5537	5507	Hyun Tibu	0	.	.	0	.	.	.	0	.	.	.	4758	13914	2	0	6265	14034	2	0
5832	3530	Infi Q45	17307	50450	0	8208	52400	5	0	3988	53520	5	0	0	.	.	.	0	.	.	.
5832	3537	Infi Q45	0	.	.	0	.	.	.	0	.	.	.	12204	48395	5	0	7723	48395	5	0
5833	3522	Infi G20	9852	21975	0	17568	22875	0	0	15417	23800	0	0	0	.	.	.	0	.	.	.
5834	3533	Infi J30	21508	36950	0	19993	38550	5	0	5267	39920	5	0	10227	33995	5	0	0	.	.	.
5835	3534	Infi I30	0	.	.	0	.	.	.	35624	28420	5	0	27213	29295	5	0	30849	29395	5	0
5931	4928	Lexu ES	36220	31200	0	38207	31500	10	0	40715	32400	10	0	0	.	.	.	0	.	.	.
5931	4936	Lexu ES	0	.	.	0	.	.	.	0	.	.	.	58689	30485	15	0	50195	31285	10	0
5932	4926	Lexu LS	20267	51200	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
5932	4934	Lexu LS	0	.	.	21444	51200	5	0	22260	52900	5	0	17623	53395	0	0	22625	53695	0	0
5933	4929	Lexu SC	5848	40000	0	15732	41700	5	0	4701	43400	5	0	5490	39495	5	0	2761	41595	5	0
5934	4932	Lexu GS	12768	41000	0	7610	43600	5	0	2455	45700	5	0	175	46195	5	0	30394	37395	5	0
6331	6302	KIA Seph	11246	8495	0	20029	8895	5	0	26841	9495	5	0	42362	10220	5	0	45115	10445	1	0
7006	7005	Jeep Cher	117016	13427	100	122967	13900	84	100	185778	14745	79	100	85135	15825	76	100	145583	16065	74	100
7014	7010	Jeep Wran	66463	11480	100	105250	11995	90	100	0	.	.	.	125357	13995	86	100	88995	14615	81	100
7017	7114	Jeep GrCh	224772	21156	100	262530	23143	93	100	280694	24093	92	100	258909	26070	85	100	247263	26470	84	100
7115	7106	Dodg RamV	89316	12951	100	55893	14284	91	100	63117	16253	88	100	68707	17460	86	100	39209	18470	88	100
7116	7106	Dodg RamW	38204	14491	100	17886	15457	90	100	20084	18783	84	100	21688	20355	87	100	13460	21066	87	100
7130	7108	Dodg Dako	102567	9600	100	117720	10286	93	100	97115	11075	89	100	127930	13235	85	100	150920	13485	86	100
7140	7112	Dodg Cara	276983	15520	100	213517	16160	89	100	0	.	.	.	0	.	.	.	0	.	.	.
7140	7118	Dodg Cara	0	.	.	0	.	.	.	344876	16615	86	100	291199	17815	80	100	289053	17995	80	100
7142	7112	Dodg CaCV	8335	15013	100	4032	16145	85	100	0	.	.	.	0	.	.	.	0	.	.	.
7148	7115	Dodg RamP	173414	12734	86	238409	13188	86	81	330104	13741	77	62	340873	14715	76	49	372776	15125	74	54
7163	7121	Dodg Durg	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	118743	27065	90	100
7203	7112	Plym Voya	223276	15520	100	163744	16160	89	100	0	.	.	.	0	.	.	.	0	.	.	.
7203	7118	Plym Voya	0	.	.	0	.	.	.	184240	16615	85	100	151486	17815	80	100	158289	17995	80	100
7302	7113	Chry T&C	36928	27484	100	12284	27680	91	100	0	.	.	.	0	.	.	.	0	.	.	.

MM2	CG	MNAME	REGS94	PLOW94	ASUC94	REGS95	PLOW95	USCAN95	ASUC95	REGS96	PLOW96	USCAN96	ASUC96	REGS97	PLOW97	USCAN97	ASUC97	REGS98	PLOW98	USCAN98	ASUC98
7302	7119	Chry T&C	0	.	.	0	.	.	.	105423	24600	89	100	78502	27260	82	100	62452	27260	81	100
7403	7402	Ford FSer	591355	12348	100	668480	13287	90	100	478801	14150	90	100	0	.	.	.	0	.	.	.
7403	7424	Ford FSer	0	.	.	0	.	.	.	0	.	.	.	1031960	15145	90	98	499970	15475	95	98
7417	7407	Ford Brnc	32249	21725	100	36705	21985	95	100	33444	22840	95	100	0	.	.	.	0	.	.	.
7429	7411	Ford Aero	132933	15150	100	109275	16725	85	100	59782	16725	85	100	53466	17815	80	100	0	.	.	.
7442	7414	Ford Expl	362083	17470	100	259271	18985	80	100	0	.	.	.	0	.	.	.	0	.	.	.
7442	7420	Ford Expl	0	.	.	0	.	.	.	420403	19570	75	100	401046	20610	75	100	444656	20405	80	100
7444	7415	Ford Econ	198034	16348	100	205047	17085	90	100	145794	17640	95	100	160253	19370	90	100	152703	19885	90	100
7452	7416	Ford Rang	446881	9449	100	217175	10224	80	100	281707	10425	85	100	296485	11480	80	100	295522	11995	80	100
7456	7419	Ford Wind	0	.	.	321897	17745	95	100	232360	18270	90	100	37530	19665	90	100	337106	18790	90	100
7466	7423	Ford Expd	0	.	.	0	.	.	.	0	.	.	.	201171	28160	85	100	237205	28865	95	100
7501	7418	Merc Vill	54007	18375	100	87628	19045	70	100	57337	19385	70	100	61523	20540	60	100	37184	21030	60	100
7503	7420	Merc Mtnr	0	.	.	0	.	.	.	0	.	.	.	65192	27765	90	100	50447	27255	90	100
7601	7613	Chev STPU	244063	9655	100	244718	10520	95	100	206481	11270	92	100	179418	12113	90	100	247140	12508	90	100
7609	7604	Chev STBl	156955	16931	100	220363	18470	95	100	253866	19444	91	100	211103	21031	91	100	240606	22178	90	100
7616	7608	Chev Astr	132700	16525	100	153088	17885	95	100	82104	19176	95	100	116664	19639	95	100	98778	19925	90	100
7618	7609	Chev GVan	81464	15905	100	142813	16908	95	100	0	.	.	.	0	.	.	.	0	.	.	.
7618	7626	Chev GVan	0	.	.	0	.	.	.	44844	18639	95	100	62392	19687	95	100	61391	20127	90	100
7631	7615	Chev CKPU	593893	12354	100	537465	13437	95	100	425437	14016	95	100	500190	15157	92	100	519238	15655	90	100
7643	8702	Chev GeoT	47596	11015	100	51253	11920	40	100	53731	12970	40	100	24258	13755	40	100	20513	13995	40	100
7652	7619	Chev APV	47605	15685	100	58705	16235	92	100	23461	17870	95	100	0	.	.	.	0	.	.	.
7662	7623	Chev Taho	26802	21330	100	82207	22030	95	88	99096	22886	95	80	113711	24147	90	90	72088	24540	86	89
7663	7624	Chev Subu	98232	20406	100	93244	21887	95	92	76042	24027	95	60	94041	25323	95	47	51951	26320	85	40
7679	7630	Chev Vent	0	.	.	0	.	.	.	0	.	.	.	71469	20495	95	100	91652	20739	75	100
7701	7613	GMC STPU	53232	9806	100	59166	10540	95	100	50188	11290	92	100	38491	12127	90	100	58943	12522	90	100
7709	7604	GMC STJm	59089	15842	100	71494	18599	95	100	82696	19573	91	100	73189	21154	91	100	78915	22301	90	100
7716	7608	GMC Safa	44361	15661	100	51082	17662	95	100	28050	18405	95	100	39277	19703	95	100	30112	19989	90	100
7718	7609	GMC GVan	29204	16006	100	49060	16978	95	100	0	.	.	.	0	.	.	.	0	.	.	.
7718	7626	GMC Sava	0	.	.	0	.	.	.	18871	18709	95	100	27746	19751	95	100	29726	20191	90	100
7731	7615	GMC CKPU	194120	12424	100	180158	13507	95	100	141519	14086	95	100	163700	15227	90	100	160567	15722	90	100
7762	7623	GMC CKYu	9963	21400	100	30315	22100	95	88	29855	22886	95	89	36750	24211	90	93	22231	30559	86	95
7763	7624	GMC Subu	36836	20476	100	35270	21957	95	94	35368	24027	95	65	40811	25387	95	49	23965	26294	85	33
7801	7619	Olds Slho	14861	19665	100	17278	20660	92	100	6091	21355	95	100	0	.	.	.	0	.	.	.
7801	7630	Olds Slho	0	.	.	0	.	.	.	0	.	.	.	20809	22245	95	100	35532	24635	75	100
7802	7621	Olds Brav	17620	24820	100	0	.	.	.	12465	29505	91	100	27628	30900	91	100	31026	31230	90	100
7901	7619	Pont Trnt	34354	17469	100	42818	17889	92	100	16283	19394	95	100	0	.	.	.	0	.	.	.
7901	7630	Pont Trnt	0	.	.	0	.	.	.	0	.	.	.	47666	21049	95	100	54635	21410	75	100

MM2	CG	MNAME	REGS94	PLOW94	ASUC94	REGS95	PLOW95	USCAN95	ASUC95	REGS96	PLOW96	USCAN96	ASUC96	REGS97	PLOW97	USCAN97	ASUC97	REGS98	PLOW98	USCAN98	ASUC98
8107	8103	Niss PU	120910	9459	100	171093	9999	30	100	87534	10999	30	100	129407	11469	40	100	86773	12480	45	100
8116	8105	Niss Pthf	51532	19669	0	100076	21019	0	0	0	.	.	.	0	.	.	.	0	.	.	.
8116	8107	Niss Pthf	0	.	.	0	.	.	.	51011	22399	5	0	80283	23369	5	0	61106	24489	5	0
8118	7418	Niss Ques	48954	19079	100	63625	19839	70	100	45124	20899	70	100	50420	21719	60	100	24911	23589	60	100
8208	8204	Isuz PUP	23062	9399	26	15983	9999	5	0	0	.	.	.	0	.	.	.	0	.	.	.
8215	8206	Isuz Amig	7104	14999	0	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
8215	8214	Isuz Amig	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	8937	15440	55	100
8218	8208	Isuz Rode	55794	15089	100	84172	15840	35	100	43860	17340	40	100	51523	17785	40	100	0	.	.	.
8218	8215	Isuz Rode	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	64987	18440	55	100
8220	8209	Isuz Troo	30308	21450	0	22401	22450	5	0	17054	25360	5	0	7979	26995	5	0	17395	26995	10	0
8222	8213	Isuz Oasi	0	.	.	0	.	.	.	1992	23495	5	0	1591	24175	5	0	1576	23977	5	0
8223	7613	Isuz Homb	0	.	.	0	.	.	.	12764	10999	92	100	11502	11757	90	100	19163	11934	90	100
8307	8303	Mazd MPV	26341	18500	0	15903	21495	1	0	14432	21465	1	0	13260	23575	2	0	14421	23575	1	0
8310	7413	Mazd Nava	8523	18225	100	0	.	.	.	0	.	.	.	0	.	.	.	0	.	.	.
8312	7416	Mazd PU	100641	9460	100	27469	10270	80	100	43736	9925	85	100	29570	10980	75	100	41227	11395	80	100
8402	8402	Suba Fors	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	42706	19190	1	0
8501	8501	Toyo PU	237545	10118	73	124076	10348	25	80	131167	12028	45	100	108358	12658	45	100	170532	12958	45	100
8507	8503	Toyo 4Run	69450	20308	0	98502	21518	5	0	0	.	.	.	0	.	.	.	0	.	.	.
8507	8510	Toyo 4Run	0	.	.	0	.	.	.	65621	19488	10	0	126379	20408	10	0	120065	21078	10	0
8516	8507	Toyo Land	15685	35298	0	8645	38688	5	0	12814	40258	10	0	15143	41608	5	0	8984	41608	5	0
8517	8508	Toyo Prev	16148	22818	0	20378	22768	5	0	7856	24318	5	0	4687	25298	10	0	0	.	.	.
8519	8509	Toyo T100	13291	12998	0	34944	13788	10	0	37534	14448	20	0	29958	15098	15	0	10196	15318	15	0
8522	8511	Toyo RAV4	0	.	.	0	.	.	.	40809	14948	5	0	71015	15538	10	0	62800	15858	5	0
8534	8516	Toyo Sien	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	74055	20760	60	100
8604	8603	Mits PU	14459	9519	0	9414	10359	10	0	476	11590	5	0	0	.	.	.	0	.	.	.
8613	8617	Mits Mont	10491	24225	0	23263	27625	2	0	6943	28470	2	0	28364	18065	7	0	45298	18475	1	0
8701	8701	Suzu Samu	1670	9689	0	347	9889	0	0	0	.	.	.	0	.	.	.	0	.	.	.
8702	8702	Suzu Skik	21359	11449	56	28498	11699	25	57	17127	12899	20	57	19375	13299	15	33	15970	13519	10	33
8706	8702	Suzu X90	0	.	.	0	.	.	.	4608	13499	5	0	2080	13619	5	0	489	13829	5	0
8901	8211	Hond Pass	22110	15660	100	36223	16330	35	100	19183	17990	40	100	21630	21865	40	100	25177	23095	55	100
8903	8213	Hond Odys	0	.	.	31376	23215	5	0	19662	23560	5	0	31463	23955	5	0	14350	24205	5	0
8904	8901	Hond CRV	0	.	.	0	.	.	.	0	.	.	.	71382	19695	0	0	95463	18745	5	0
9001	9001	KIA Spor	0	.	.	10424	13495	10	0	8595	14000	5	0	23334	14920	5	0	25728	15345	8	0
9101	8212	Acur SLX	0	.	.	0	.	.	.	2832	33900	5	0	1005	35735	5	0	1758	36735	10	0
9201	8507	Lexu LX45	0	.	.	0	.	.	.	5125	47500	5	0	8853	49195	5	0	6276	55445	0	0
9301	9301	LanR LanR	7405	27900	0	20679	28650	0	0	24496	29950	0	0	23657	32625	0	0	19775	35625	0	0
9401	8107	Infi QX4	0	.	.	0	.	.	.	0	.	.	.	16377	36045	5	0	16916	36045	5	0

MM2	CG	MMNAME	REGS94	PLOW94	ASUC94	REGS95	PLOW95	USCAN95	ASUC95	REGS96	PLOW96	USCAN96	ASUC96	REGS97	PLOW97	USCAN97	ASUC97	REGS98	PLOW98	USCAN98	ASUC98
9501	7423	Linc Navg	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	57852	39950	90	100
9601	9601	Merz M320	0	.	.	0	.	.	.	0	.	.	.	0	.	.	.	39349	34545	60	100

APPENDIX B: LISTING OF THE DATA FILE FOR THE REGRESSION ANALYSES

MMG	=	make-model group
NAME_PLT	=	nameplate: Big 3, transplant or import
VEH_TYP	=	vehicle type: passenger car, pickup truck, van or SUV
CURR_YR	=	current model year: 1995, 1996, 1997 or 1998
SALES_CY	=	"model year" sales for this make-model group in the current model year (all vehicles sold between October 1 of the preceding year and September 30 of this year, regardless of their production-model-year)
SALES_PY	=	sales for this make-model group in the model year immediately preceding the current model year
SALES_2Y	=	SALES_CY + SALES_PY (regression case-weight factor)
D_SALES	=	log(SALES_CY / SALES_PY), the dependent variable (sales growth from the preceding to the current model year)
PRICE_CY	=	average of the base retail (sticker) prices of the make-models in this make-model group, in the current model year
PRICE_PY	=	average of the base retail (sticker) prices of the make-models in this make-model group, in the model year preceding the current model year
D_PRICE	=	log(PRICE_CY / PRICE_PY), price growth from the preceding to the current model year
USCAN_CY	=	average % U.S./Canadian parts content of the make-models in this make-model group, as reported on the AALA labels, in the current model year
USCAN_PY	=	average % U.S./Canadian parts content of the make-models in this make-model group, as reported on the AALA labels, in the model year preceding the current model year (unknown if CURR_YR = 1995, since there were no AALA labels in 1994)
D_USCAN	=	.01 [USCAN_CY - USCAN_PY] if CURR_YR = 1996, 1997 or 1998
	=	.01 [USCAN_CY - 90.09] for Big 3 vehicles if CURR_YR = 1995
	=	.01 [USCAN_CY - 48.39] for transplants if CURR_YR = 1995
	=	.01 [USCAN_CY - 4.69] for imports if CURR_YR = 1995
	=	growth in U.S./Canadian parts content from the preceding to the current model year - or, in 1995, deviation of actual parts content from the average for a vehicle of this type

MMG	NAME_PLT	VEH_TYP	CURR_YR	CHG_MODL	SALES_CY	SALES_PY	SALES_2Y	D_SALES	PRICE_CY	PRICE_PY	D_PRICE	USCAN_CY	USCAN_PY	D_USCAN
CHRYSLER LeBARON	BIG 3	CAR	1995	LAST YR IT EXIST	34792	38416	73208	-0.099	17469	16551	0.054	84.0	.	-0.061
CONCORDE/LHS	BIG 3	CAR	1995	NO CHANGE	105741	137106	242847	-0.260	23043	22939	0.005	94.0	.	0.039
CONCORDE/LHS	BIG 3	CAR	1996	NO CHANGE	89154	105741	194895	-0.171	22739	23043	-0.013	90.3	94.0	-0.037
CONCORDE/LHS	BIG 3	CAR	1997	NO CHANGE	83672	89154	172826	-0.063	25326	22739	0.108	87.0	90.3	-0.033
CONCORDE/LHS	BIG 3	CAR	1998	ONE NAME DROPPED	52261	83672	135933	-0.471	21855	25326	-0.147	85.0	87.0	-0.020
SEBRING/AVENGER	BIG 3	CAR	1996	2ND YR IT EXIST	68872	51198	120070	0.297	15157	14086	0.073	71.1	71.3	-0.002
SEBRING/AVENGER	BIG 3	CAR	1997	NO CHANGE	65520	68872	134392	-0.050	16147	15157	0.063	61.0	71.1	-0.101
SEBRING/AVENGER	BIG 3	CAR	1998	NO CHANGE	60428	65520	125948	-0.081	16732	16147	0.036	69.3	61.0	0.083
SEBRING CONVERTIBLE	BIG 3	CAR	1997	2ND YR IT EXIST	55594	45395	100989	0.203	20685	19460	0.061	45.0	50.0	-0.050
SEBRING CONVERTIBLE	BIG 3	CAR	1998	NO CHANGE	51286	55594	106880	-0.081	21110	20685	0.020	40.0	45.0	-0.050
CIRRUS/STRATUS/BREEZE	BIG 3	CAR	1996	ADDL NAME INTROD	187143	115542	302685	0.482	15030	15840	-0.053	79.2	80.8	-0.016
CIRRUS/STRATUS/BREEZE	BIG 3	CAR	1997	NO CHANGE	192501	187143	379644	0.028	15935	15030	0.059	78.5	79.2	-0.006
CIRRUS/STRATUS/BREEZE	BIG 3	CAR	1998	NO CHANGE	221703	192501	414204	0.141	16156	15935	0.014	76.4	78.5	-0.021
SPIRIT/ACCLAIM	BIG 3	CAR	1995	LAST YR IT EXIST	43711	133656	177367	-1.118	14323	13649	0.048	76.0	.	-0.141
NEON	BIG 3	CAR	1996	2ND YR IT EXIST	248226	239153	487379	0.037	9495	9500	-0.001	80.0	92.0	-0.120
NEON	BIG 3	CAR	1997	NO CHANGE	201092	248226	449318	-0.211	11300	9495	0.174	75.7	80.0	-0.043
NEON	BIG 3	CAR	1998	NO CHANGE	210792	201092	411884	0.047	11600	11300	0.026	71.0	75.7	-0.047
INTREPID/VISION	BIG 3	CAR	1995	NO CHANGE	173974	147235	321209	0.167	18238	17985	0.014	94.0	.	0.039
INTREPID/VISION	BIG 3	CAR	1996	NO CHANGE	158443	173974	332417	-0.094	18515	18238	0.015	89.1	94.0	-0.049
INTREPID/VISION	BIG 3	CAR	1997	NO CHANGE	143566	158443	302009	-0.099	20033	18515	0.079	88.0	89.1	-0.011
INTREPID/VISION	BIG 3	CAR	1998	ONE NAME DROPPED	88679	143566	232245	-0.482	20235	20033	0.010	86.0	88.0	-0.020
MUSTANG	BIG 3	CAR	1995	2ND YR AFT REDES	138867	147744	286611	-0.062	14530	13365	0.084	90.0	.	-0.001
MUSTANG	BIG 3	CAR	1996	NO CHANGE	129718	138867	268585	-0.068	15180	14530	0.044	90.0	90.0	0.000
MUSTANG	BIG 3	CAR	1997	NO CHANGE	112311	129718	242029	-0.144	15880	15180	0.045	80.0	90.0	-0.100
MUSTANG	BIG 3	CAR	1998	NO CHANGE	136488	112311	248799	0.195	16675	15880	0.049	90.0	80.0	0.100
T-BIRD/COUGAR	BIG 3	CAR	1995	COMPETITOR INTRO	175276	211845	387121	-0.189	17214	16714	0.029	90.0	.	-0.001
T-BIRD/COUGAR	BIG 3	CAR	1996	NO CHANGE	121347	175276	296623	-0.368	17468	17214	0.015	90.0	90.0	0.000
T-BIRD/COUGAR	BIG 3	CAR	1997	LAST YR IT EXIST	107558	121347	228905	-0.121	18378	17468	0.051	80.0	90.0	-0.100
ESCORT/TRACER	BIG 3	CAR	1995	NO CHANGE	359138	380211	739349	-0.057	9952	9306	0.067	79.2	.	-0.109
ESCORT/TRACER	BIG 3	CAR	1996	NO CHANGE	342996	359138	702134	-0.046	10312	9952	0.035	83.5	79.2	0.043
ESCORT/TRACER	BIG 3	CAR	1997	NO CHANGE	326187	342996	669183	-0.050	11448	10312	0.105	80.0	83.5	-0.035
ESCORT/TRACER	BIG 3	CAR	1998	NO CHANGE	331673	326187	657860	0.017	11853	11448	0.035	71.1	80.0	-0.089
CROWN VIC/GR MARQUIS	BIG 3	CAR	1995	NO CHANGE	189259	197113	386372	-0.041	20704	19815	0.044	80.0	.	-0.101
CROWN VIC/GR MARQUIS	BIG 3	CAR	1996	NO CHANGE	204406	189259	393665	0.077	21445	20704	0.035	85.0	80.0	0.050
CROWN VIC/GR MARQUIS	BIG 3	CAR	1997	NO CHANGE	216291	204406	420697	0.057	22632	21445	0.054	80.0	85.0	-0.050
CROWN VIC/GR MARQUIS	BIG 3	CAR	1998	NO CHANGE	222260	216291	438551	0.027	22228	22632	-0.018	85.0	80.0	0.050

MMG	NAME_PLT	VEH_TYP	CURR_YR	CHG_MODL	SALES_CY	SALES_PY	SALES_2Y	D_SALES	PRICE_CY	PRICE_PY	D_PRICE	USCAN_CY	USCAN_PY	D_USCAN
TAURUS/SABLE	BIG 3	CAR	1995	LAST YR BF REDES	503503	491889	995392	0.023	17716	16601	0.065	90.0	.	-0.001
TAURUS/SABLE	BIG 3	CAR	1996	REDES SAME NAME	495076	503503	998579	-0.017	18231	17716	0.029	85.0	90.0	-0.050
TAURUS/SABLE	BIG 3	CAR	1997	2ND YR AFT REDES	477469	495076	972545	-0.036	18904	18231	0.036	85.0	85.0	0.000
TAURUS/SABLE	BIG 3	CAR	1998	NO CHANGE	481823	477469	959292	0.009	19225	18904	0.017	86.1	85.0	0.011
FORD PROBE	BIG 3	CAR	1996	NO CHANGE	35457	63513	98970	-0.583	13930	14180	-0.018	60.0	65.0	-0.050
FORD PROBE	BIG 3	CAR	1997	LAST YR IT EXIST	20922	35457	56379	-0.528	14755	13930	0.058	65.0	60.0	0.050
CONTOUR/MYSTIQUE	BIG 3	CAR	1996	2ND YR IT EXIST	242645	209436	452081	0.147	13915	13456	0.034	80.0	80.0	0.000
CONTOUR/MYSTIQUE	BIG 3	CAR	1997	NO CHANGE	196883	242645	439528	-0.209	14106	13915	0.014	75.0	80.0	-0.050
CONTOUR/MYSTIQUE	BIG 3	CAR	1998	NO CHANGE	184103	196883	380986	-0.067	15412	14106	0.089	75.0	75.0	0.000
FORD ASPIRE	BIG 3	CAR	1996	NO CHANGE	40849	60212	101061	-0.388	8790	8440	0.041	5.0	5.0	0.000
FORD ASPIRE	BIG 3	CAR	1997	LAST YR IT EXIST	34922	40849	75771	-0.157	9530	8790	0.081	5.0	5.0	0.000
LINCOLN TOWN CAR	BIG 3	CAR	1995	NO CHANGE	103045	118300	221345	-0.138	36400	34750	0.046	90.0	.	-0.001
LINCOLN TOWN CAR	BIG 3	CAR	1996	NO CHANGE	88451	103045	191496	-0.153	36910	36400	0.014	90.0	90.0	0.000
LINCOLN TOWN CAR	BIG 3	CAR	1997	NO CHANGE	94565	88451	183016	0.067	37950	36910	0.028	80.0	90.0	-0.100
LINCOLN TOWN CAR	BIG 3	CAR	1998	NO CHANGE	98346	94565	192911	0.039	38700	37950	0.020	85.0	80.0	0.050
LINCOLN CONTINENTAL	BIG 3	CAR	1995	NO CHANGE	40337	29333	69670	0.319	40750	33750	0.188	90.0	.	-0.001
LINCOLN CONTINENTAL	BIG 3	CAR	1996	NO CHANGE	36054	40337	76391	-0.112	41800	40750	0.025	95.0	90.0	0.050
LINCOLN CONTINENTAL	BIG 3	CAR	1997	NO CHANGE	27702	36054	63756	-0.264	37950	41800	-0.097	80.0	95.0	-0.150
LINCOLN CONTINENTAL	BIG 3	CAR	1998	NO CHANGE	35748	27702	63450	0.255	38600	37950	0.017	90.0	80.0	0.100
LeSABRE/88/BONNEVILLE	BIG 3	CAR	1995	NO CHANGE	286857	324363	611220	-0.123	20767	20498	0.013	95.0	.	0.049
LeSABRE/88/BONNEVILLE	BIG 3	CAR	1996	NO CHANGE	275640	286857	562497	-0.040	21224	20767	0.022	95.0	95.0	0.000
LeSABRE/88/BONNEVILLE	BIG 3	CAR	1997	NO CHANGE	290750	275640	566390	0.053	22810	21224	0.072	95.0	95.0	0.000
LeSABRE/88/BONNEVILLE	BIG 3	CAR	1998	NO CHANGE	263611	290750	554361	-0.098	23170	22810	0.016	86.0	95.0	-0.090
PARK AVE/98	BIG 3	CAR	1995	NO CHANGE	74403	89955	164358	-0.190	27049	26436	0.023	95.0	.	0.049
PARK AVE/98	BIG 3	CAR	1996	NO CHANGE	61354	74403	135757	-0.193	28194	27049	0.041	95.0	95.0	0.000
PARK AVE/98	BIG 3	CAR	1997	LAST YR BF REDES	65046	61354	126400	0.058	30660	28194	0.084	95.0	95.0	0.000
PARK AVE/98	BIG 3	CAR	1998	REDES SAME NAME	60330	65046	125376	-0.075	31340	30660	0.022	90.0	95.0	-0.050
CAPRICE/ROADMASTER	BIG 3	CAR	1995	NO CHANGE	106396	131305	237701	-0.210	21386	20491	0.043	92.0	.	0.019
CAPRICE/ROADMASTER	BIG 3	CAR	1996	LAST YR IT EXIST	72358	106396	178754	-0.386	21467	21386	0.004	92.0	92.0	0.000
BUICK CENTURY	BIG 3	CAR	1995	NO CHANGE	98421	138634	237055	-0.343	15815	15800	0.001	85.0	.	-0.051
BUICK CENTURY	BIG 3	CAR	1996	LAST YR BF REDES	87322	98421	185743	-0.120	16720	15815	0.056	82.0	85.0	-0.030
BUICK CENTURY	BIG 3	CAR	1997	REDES SAME NAME	71107	87322	158429	-0.205	18425	16720	0.097	91.0	82.0	0.090
BUICK CENTURY	BIG 3	CAR	1998	2ND YR AFT REDES	122655	71107	193762	0.545	18965	18425	0.029	86.0	91.0	-0.050
GRAND AM/SKYLARK/ACHIEVA	BIG 3	CAR	1995	NO CHANGE	341077	363540	704617	-0.064	13365	12880	0.037	91.0	.	0.009
GRAND AM/SKYLARK/ACHIEVA	BIG 3	CAR	1996	NO CHANGE	307269	341077	648346	-0.104	13782	13365	0.031	92.0	91.0	0.010
GRAND AM/SKYLARK/ACHIEVA	BIG 3	CAR	1997	NO CHANGE	335576	307269	642845	0.088	15584	13782	0.123	90.0	92.0	-0.020

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GRAND AM/SKYLARK/ACHIEVA	BIG 3	CAR	1998	LAST YR BF REDES	204237	335576	539813	-0.497	16569	15584	0.061	80.0	90.0	-0.100
BUICK REGAL	BIG 3	CAR	1995	NO CHANGE	91938	72522	164460	0.237	18690	18324	0.020	90.0	.	-0.001
BUICK REGAL	BIG 3	CAR	1996	LAST YR BF REDES	93465	91938	185403	0.016	19445	18690	0.040	95.0	90.0	0.050
BUICK REGAL	BIG 3	CAR	1997	REDES SAME NAME	49362	93465	142827	-0.638	21095	19445	0.081	91.0	95.0	-0.040
BUICK REGAL	BIG 3	CAR	1998	2ND YR AFT REDES	64012	49362	113374	0.260	21595	21095	0.023	86.0	91.0	-0.050
CADILLAC DeVILLE	BIG 3	CAR	1995	2ND YR AFT REDES	110830	116155	226985	-0.047	34900	32990	0.056	96.0	.	0.059
CADILLAC DeVILLE	BIG 3	CAR	1996	NO CHANGE	108349	110830	219179	-0.023	35995	34900	0.031	95.0	96.0	-0.010
CADILLAC DeVILLE	BIG 3	CAR	1997	NO CHANGE	103723	108349	212072	-0.044	37660	35995	0.045	92.0	95.0	-0.030
CADILLAC DeVILLE	BIG 3	CAR	1998	NO CHANGE	101224	103723	204947	-0.024	38360	37660	0.018	86.0	92.0	-0.060
CADILLAC ELDORADO	BIG 3	CAR	1995	NO CHANGE	22562	25400	47962	-0.118	38220	37690	0.014	95.0	.	0.049
CADILLAC ELDORADO	BIG 3	CAR	1996	NO CHANGE	21527	22562	44089	-0.047	39595	38220	0.035	95.0	95.0	0.000
CADILLAC ELDORADO	BIG 3	CAR	1997	NO CHANGE	16111	21527	37638	-0.290	38660	39595	-0.024	92.0	95.0	-0.030
CADILLAC ELDORADO	BIG 3	CAR	1998	NO CHANGE	21117	16111	37228	0.271	39160	38660	0.013	86.0	92.0	-0.060
CADILLAC SEVILLE	BIG 3	CAR	1995	NO CHANGE	35528	39832	75360	-0.114	41935	41430	0.012	96.0	.	0.059
CADILLAC SEVILLE	BIG 3	CAR	1996	NO CHANGE	34949	35528	70477	-0.016	42995	41935	0.025	95.0	96.0	-0.010
CADILLAC SEVILLE	BIG 3	CAR	1997	LAST YR BF REDES	35225	34949	70174	0.008	40660	42995	-0.056	92.0	95.0	-0.030
CADILLAC SEVILLE	BIG 3	CAR	1998	REDES SAME NAME	30102	35225	65327	-0.157	43160	40660	0.060	86.0	92.0	-0.060
CADILLAC CATERA	BIG 3	CAR	1998	2ND YR IT EXIST	25759	20680	46439	0.220	30635	30635	0.000	4.0	3.0	0.010
CHEVROLET CORVETTE	BIG 3	CAR	1995	NO CHANGE	19224	22137	41361	-0.141	36785	36285	0.014	90.0	.	-0.001
CHEVROLET CORVETTE	BIG 3	CAR	1996	LAST YR BF REDES	21560	19224	40784	0.115	37225	36785	0.012	87.0	90.0	-0.030
CHEVROLET CORVETTE	BIG 3	CAR	1997	REDES SAME NAME	16116	21560	37676	-0.291	38060	37225	0.022	85.0	87.0	-0.020
CHEVROLET CORVETTE	BIG 3	CAR	1998	2ND YR AFT REDES	29331	16116	45447	0.599	38560	38060	0.013	82.0	85.0	-0.030
CAMARO/FIREBIRD	BIG 3	CAR	1995	NO CHANGE	140753	170620	311373	-0.192	14676	13663	0.072	91.0	.	0.009
CAMARO/FIREBIRD	BIG 3	CAR	1996	NO CHANGE	126128	140753	266881	-0.110	15171	14676	0.033	86.0	91.0	-0.050
CAMARO/FIREBIRD	BIG 3	CAR	1997	NO CHANGE	88611	126128	214739	-0.353	17070	15171	0.118	91.0	86.0	0.050
CAMARO/FIREBIRD	BIG 3	CAR	1998	NO CHANGE	82384	88611	170995	-0.073	17717	17070	0.037	86.0	91.0	-0.050
CAVALIER/SUNFIRE	BIG 3	CAR	1995	REDES SAME NAME	220277	333721	553998	-0.415	10324	9213	0.114	90.0	.	-0.001
CAVALIER/SUNFIRE	BIG 3	CAR	1996	2ND YR AFT REDES	362667	220277	582944	0.499	10774	10324	0.043	90.0	90.0	0.000
CAVALIER/SUNFIRE	BIG 3	CAR	1997	NO CHANGE	409884	362667	772551	0.122	11746	10774	0.086	90.0	90.0	0.000
CAVALIER/SUNFIRE	BIG 3	CAR	1998	NO CHANGE	346563	409884	756447	-0.168	12332	11746	0.049	81.0	90.0	-0.090
CORSICA/BERETTA	BIG 3	CAR	1995	NO CHANGE	207547	204335	411882	0.016	13095	12585	0.040	91.0	.	0.009
CORSICA/BERETTA	BIG 3	CAR	1996	LAST YR IT EXIST	187592	207547	395139	-0.101	13490	13095	0.030	95.0	91.0	0.040
CHEVROLET MALIBU	BIG 3	CAR	1998	2ND YR IT EXIST	221405	108649	330054	0.712	16195	15995	0.012	80.0	90.0	-0.100
CHEVROLET LUMINA	BIG 3	CAR	1995	NO CHANGE	209646	111609	321255	0.630	15760	15305	0.029	90.0	.	-0.001
CHEVROLET LUMINA	BIG 3	CAR	1996	NO CHANGE	246824	209646	456470	0.163	16355	15760	0.037	95.0	90.0	0.050
CHEVROLET LUMINA	BIG 3	CAR	1997	NO CHANGE	232888	246824	479712	-0.058	17495	16355	0.067	91.0	95.0	-0.040

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CHEVROLET LUMINA	BIG 3	CAR	1998	NO CHANGE	176505	232888	409393	-0.277	17945	17495	0.025	86.0	91.0	-0.050
GEO PRIZM	BIG 3	CAR	1996	NO CHANGE	84856	100084	184940	-0.165	12495	11675	0.068	55.0	50.0	0.050
GEO PRIZM	BIG 3	CAR	1997	NO CHANGE	59605	84856	144461	-0.353	13245	12495	0.058	51.0	55.0	-0.040
GEO PRIZM	BIG 3	CAR	1998	NO CHANGE	49842	59605	109447	-0.179	12563	13245	-0.053	62.0	51.0	0.110
GEO METRO	BIG 3	CAR	1996	NO CHANGE	91888	69908	161796	0.273	8380	8085	0.036	50.0	45.0	0.050
GEO METRO	BIG 3	CAR	1997	NO CHANGE	60958	91888	152846	-0.410	8920	8380	0.062	50.0	50.0	0.000
GEO METRO	BIG 3	CAR	1998	NO CHANGE	33965	60958	94923	-0.585	9095	8920	0.019	50.0	50.0	0.000
CHEVROLET MONTE CARLO	BIG 3	CAR	1996	2ND YR IT EXIST	81170	73119	154289	0.104	17255	16770	0.029	95.0	90.0	0.050
CHEVROLET MONTE CARLO	BIG 3	CAR	1997	NO CHANGE	73595	81170	154765	-0.098	17995	17255	0.042	91.0	95.0	-0.040
CHEVROLET MONTE CARLO	BIG 3	CAR	1998	NO CHANGE	63222	73595	136817	-0.152	18495	17995	0.027	86.0	91.0	-0.050
CIERA/CUTLASS	BIG 3	CAR	1995	NO CHANGE	130876	138133	269009	-0.054	14865	13670	0.084	85.0	.	-0.051
CIERA/CUTLASS	BIG 3	CAR	1996	LAST YR BF RENAM	107065	130876	237941	-0.201	13955	14865	-0.063	82.0	85.0	-0.030
CIERA/CUTLASS	BIG 3	CAR	1997	REDES NEW NAME	17392	107065	124457	-1.817	17850	13955	0.246	90.0	82.0	0.080
CIERA/CUTLASS	BIG 3	CAR	1998	2ND YR AFT REDES	50375	17392	67767	1.063	18325	17850	0.026	80.0	90.0	-0.100
SUPREME/INTRIGUE	BIG 3	CAR	1995	NO CHANGE	100984	101738	202722	-0.007	17665	16670	0.058	90.0	.	-0.001
SUPREME/INTRIGUE	BIG 3	CAR	1996	NO CHANGE	80856	100984	181840	-0.222	17455	17665	-0.012	95.0	90.0	0.050
SUPREME/INTRIGUE	BIG 3	CAR	1997	LAST YR BF RENAM	55477	80856	136333	-0.377	19500	17455	0.111	91.0	95.0	-0.040
SUPREME/INTRIGUE	BIG 3	CAR	1998	REDES NEW NAME	83626	55477	139103	0.410	21440	19500	0.095	86.0	91.0	-0.050
OLDS AURORA	BIG 3	CAR	1996	2ND YR IT EXIST	22957	31727	54684	-0.324	34360	33065	0.038	95.0	96.0	-0.010
OLDS AURORA	BIG 3	CAR	1997	NO CHANGE	25264	22957	48221	0.096	36400	34360	0.058	90.0	95.0	-0.050
OLDS AURORA	BIG 3	CAR	1998	NO CHANGE	26411	25264	51675	0.044	36825	36400	0.012	87.0	90.0	-0.030
PONTIAC GRAND PRIX	BIG 3	CAR	1995	NO CHANGE	123057	131658	254715	-0.068	16634	16254	0.023	90.0	.	-0.001
PONTIAC GRAND PRIX	BIG 3	CAR	1996	LAST YR BF REDES	100512	123057	223569	-0.202	17089	16634	0.027	95.0	90.0	0.050
PONTIAC GRAND PRIX	BIG 3	CAR	1997	REDES SAME NAME	144392	100512	244904	0.362	18769	17089	0.094	91.0	95.0	-0.040
PONTIAC GRAND PRIX	BIG 3	CAR	1998	2ND YR AFT REDES	119512	144392	263904	-0.189	19345	18769	0.030	86.0	91.0	-0.050
SATURN	BIG 3	CAR	1995	NO CHANGE	286926	267450	554376	0.070	9995	9995	0.000	95.0	.	0.049
SATURN	BIG 3	CAR	1996	NO CHANGE	286155	286926	573081	-0.003	10495	9995	0.049	95.0	95.0	0.000
SATURN	BIG 3	CAR	1997	NO CHANGE	260102	286155	546257	-0.095	10995	10495	0.047	95.0	95.0	0.000
SATURN	BIG 3	CAR	1998	NO CHANGE	232109	260102	492211	-0.114	11035	10995	0.004	95.0	95.0	0.000
VW JETTA	IMPORT	CAR	1995	NO CHANGE	73252	50882	124134	0.364	13475	13750	-0.020	10.0	.	0.053
VW JETTA	IMPORT	CAR	1996	NO CHANGE	82118	73252	155370	0.114	14250	13475	0.056	15.0	10.0	0.050
VW JETTA	IMPORT	CAR	1997	NO CHANGE	87808	82118	169926	0.067	15070	14250	0.056	10.0	15.0	-0.050
VW JETTA	IMPORT	CAR	1998	LAST YR BF REDES	95489	87808	183297	0.084	15095	15070	0.002	15.0	10.0	0.050
VW GOLF	IMPORT	CAR	1995	NO CHANGE	16885	14517	31402	0.151	12500	12325	0.014	10.0	.	0.053
VW GOLF	IMPORT	CAR	1996	NO CHANGE	23928	16885	40813	0.349	13150	12500	0.051	15.0	10.0	0.050
VW GOLF	IMPORT	CAR	1997	NO CHANGE	22935	23928	46863	-0.042	13970	13150	0.060	5.0	15.0	-0.100

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VW GOLF	IMPORT	CAR	1998	LAST YR BF REDES	20391	22935	43326	-0.118	13995	13970	0.002	10.0	5.0	0.050
BMW 300	IMPORT	CAR	1995	NO CHANGE	54006	50351	104357	0.070	24975	24675	0.012	5.0	.	0.003
BMW 300	IMPORT	CAR	1996	NO CHANGE	62222	54006	116228	0.142	20560	24975	-0.195	5.0	5.0	0.000
BMW 300	IMPORT	CAR	1997	COMPETITOR INTRO	31975	62222	94197	-0.666	21960	20560	0.066	5.0	5.0	0.000
BMW 300	IMPORT	CAR	1998	NO CHANGE	50029	31975	82004	0.448	21960	21960	0.000	5.0	5.0	0.000
BMW 500	IMPORT	CAR	1995	NO CHANGE	23520	22901	46421	0.027	35300	34900	0.011	5.0	.	0.003
BMW 500	IMPORT	CAR	1996	LAST.YR BF REDES	23143	23520	46663	-0.016	37900	35300	0.071	5.0	5.0	0.000
BMW 500	IMPORT	CAR	1997	REDES SAME NAME	28525	23143	51668	0.209	39470	37900	0.041	5.0	5.0	0.000
BMW 500	IMPORT	CAR	1998	2ND YR AFT REDES	34893	28525	63418	0.202	39470	39470	0.000	5.0	5.0	0.000
BMW Z3	TRANSPLANT	CAR	1998	2ND YR IT EXIST	21075	29737	50812	-0.344	29995	29995	0.000	40.0	40.0	0.000
NISSAN MAXIMA	IMPORT	CAR	1995	REDES SAME NAME	128784	116994	245778	0.096	19999	22429	-0.115	5.0	.	0.003
NISSAN MAXIMA	IMPORT	CAR	1996	2ND YR AFT REDES	129284	128784	258068	0.004	20999	19999	0.049	5.0	5.0	0.000
NISSAN MAXIMA	IMPORT	CAR	1997	NO CHANGE	124639	129284	253923	-0.037	21969	20999	0.045	5.0	5.0	0.000
NISSAN MAXIMA	IMPORT	CAR	1998	NO CHANGE	116860	124639	241499	-0.064	21989	21969	0.001	5.0	5.0	0.000
NISSAN SENTRA	TRANSPLANT	CAR	1995	REDES SAME NAME	165663	175441	341104	-0.057	10999	10199	0.076	45.0	.	-0.034
NISSAN SENTRA	TRANSPLANT	CAR	1996	2ND YR AFT REDES	167508	165663	333171	0.011	11499	10999	0.044	45.0	45.0	0.000
NISSAN SENTRA	TRANSPLANT	CAR	1997	NO CHANGE	154147	167508	321655	-0.083	11969	11499	0.040	45.0	45.0	0.000
NISSAN SENTRA	TRANSPLANT	CAR	1998	NO CHANGE	107049	154147	261196	-0.365	11989	11969	0.002	45.0	45.0	0.000
NISSAN ALTIMA	TRANSPLANT	CAR	1995	NO CHANGE	158842	163522	322364	-0.029	14969	13999	0.067	40.0	.	-0.084
NISSAN ALTIMA	TRANSPLANT	CAR	1996	NO CHANGE	149260	158842	308102	-0.062	15649	14969	0.044	40.0	40.0	0.000
NISSAN ALTIMA	TRANSPLANT	CAR	1997	NO CHANGE	139728	149260	288988	-0.066	16319	15649	0.042	45.0	40.0	0.050
NISSAN ALTIMA	TRANSPLANT	CAR	1998	NO CHANGE	144287	139728	284015	0.032	15480	16319	-0.053	55.0	45.0	0.100
HONDA CIVIC	TRANSPLANT	CAR	1995	NO CHANGE	273441	265871	539312	0.028	9890	9400	0.051	45.0	.	-0.034
HONDA CIVIC	TRANSPLANT	CAR	1996	NO CHANGE	287718	273441	561159	0.051	10350	9890	0.045	70.0	45.0	0.250
HONDA CIVIC	TRANSPLANT	CAR	1997	NO CHANGE	318091	287718	605809	0.100	10945	10350	0.056	60.0	70.0	-0.100
HONDA CIVIC	TRANSPLANT	CAR	1998	NO CHANGE	328748	318091	646839	0.033	11045	10945	0.009	70.0	60.0	0.100
HONDA ACCORD	TRANSPLANT	CAR	1995	2ND YR AFT REDES	345845	362407	708252	-0.047	14940	14130	0.056	50.0	.	0.016
HONDA ACCORD	TRANSPLANT	CAR	1996	NO CHANGE	367137	345845	712982	0.060	15100	14940	0.011	65.0	50.0	0.150
HONDA ACCORD	TRANSPLANT	CAR	1997	NO CHANGE	365800	367137	732937	-0.004	15495	15100	0.026	60.0	65.0	-0.050
HONDA ACCORD	TRANSPLANT	CAR	1998	NO CHANGE	413628	365800	779428	0.123	15495	15495	0.000	75.0	60.0	0.150
MAZDA PROTEGE	IMPORT	CAR	1995	REDES SAME NAME	71833	93102	164935	-0.259	12295	9495	0.258	4.0	.	-0.007
MAZDA PROTEGE	IMPORT	CAR	1996	2ND YR AFT REDES	62018	71833	133851	-0.147	11695	12295	-0.050	4.0	4.0	0.000
MAZDA PROTEGE	IMPORT	CAR	1997	NO CHANGE	52786	62018	114804	-0.161	12595	11695	0.074	4.0	4.0	0.000
MAZDA PROTEGE	IMPORT	CAR	1998	NO CHANGE	55009	52786	107795	0.041	12595	12595	0.000	5.0	4.0	0.010
MAZDA 626	TRANSPLANT	CAR	1995	NO CHANGE	99086	81210	180296	0.199	14995	14495	0.034	65.0	.	0.166
MAZDA 626	TRANSPLANT	CAR	1996	NO CHANGE	81638	99086	180724	-0.194	15495	14995	0.033	65.0	65.0	0.000

MMG	NAME_PLT	VEH_TYP	CUR_YR	CHG_MODL	SALES_CY	SALES_PY	SALES_2Y	D_SALES	PRICE_CY	PRICE_PY	D_PRICE	USCAN_CY	USCAN_PY	D_USCAN
MAZDA 626	TRANSPLANT	CAR	1997	LAST YR BF REDES	75847	81638	157485	-0.074	16145	15495	0.041	65.0	65.0	0.000
MAZDA 626	TRANSPLANT	CAR	1998	REDES SAME NAME	89104	75847	164951	0.161	16000	16145	-0.009	65.0	65.0	0.000
MERCEDES E	IMPORT	CAR	1995	LAST YR BF REDES	22641	27983	50624	-0.212	41000	40000	0.025	2.0	.	-0.027
MERCEDES E	IMPORT	CAR	1996	REDES SAME NAME	35898	22641	58539	0.461	39900	41000	-0.027	2.0	2.0	0.000
MERCEDES E	IMPORT	CAR	1997	2ND YR AFT REDES	41873	35898	77771	0.154	40495	39900	0.015	0.0	2.0	-0.020
MERCEDES E	IMPORT	CAR	1998	NO CHANGE	45585	41873	87458	0.085	42395	40495	0.046	0.0	0.0	0.000
MERCEDES C	IMPORT	CAR	1995	2ND YR IT EXIST	27753	17358	45111	0.469	30950	29900	0.035	2.0	.	-0.027
MERCEDES C	IMPORT	CAR	1996	NO CHANGE	26687	27753	54440	-0.039	29900	30950	-0.035	2.0	2.0	0.000
MERCEDES C	IMPORT	CAR	1997	NO CHANGE	30562	26687	57249	0.136	31045	29900	0.038	0.0	2.0	-0.020
MERCEDES C	IMPORT	CAR	1998	NO CHANGE	36638	30562	67200	0.181	31045	31045	0.000	0.0	0.0	0.000
SAAB 900	IMPORT	CAR	1995	2ND YR AFT REDES	19927	14116	34043	0.345	23375	21990	0.061	1.0	.	-0.037
SAAB 900	IMPORT	CAR	1996	NO CHANGE	21151	19927	41078	0.060	23995	23375	0.026	1.0	1.0	0.000
SAAB 900	IMPORT	CAR	1997	NO CHANGE	22917	21151	44068	0.080	25995	23995	0.080	2.0	1.0	0.010
SAAB 900	IMPORT	CAR	1998	NO CHANGE	25684	22917	48601	0.114	26050	25995	0.002	2.0	2.0	0.000
SUBARU LEGACY	TRANSPLANT	CAR	1995	REDES SAME NAME	68322	60545	128867	0.121	14364	13999	0.026	35.0	.	-0.134
SUBARU LEGACY	TRANSPLANT	CAR	1996	2ND YR AFT REDES	91559	68322	159881	0.293	16495	14364	0.138	40.0	35.0	0.050
SUBARU LEGACY	TRANSPLANT	CAR	1997	NO CHANGE	93999	91559	185558	0.026	17390	16495	0.053	40.0	40.0	0.000
SUBARU LEGACY	TRANSPLANT	CAR	1998	NO CHANGE	89682	93999	183681	-0.047	17390	17390	0.000	40.0	40.0	0.000
SUBARU IMPREZA	IMPORT	CAR	1995	NO CHANGE	24838	31389	56227	-0.234	11850	11200	0.056	1.0	.	-0.037
SUBARU IMPREZA	IMPORT	CAR	1996	NO CHANGE	22843	24838	47681	-0.084	13495	11850	0.130	1.0	1.0	0.000
SUBARU IMPREZA	IMPORT	CAR	1997	NO CHANGE	26288	22843	49131	0.140	14290	13495	0.057	1.0	1.0	0.000
SUBARU IMPREZA	IMPORT	CAR	1998	NO CHANGE	19754	26288	46042	-0.286	16390	14290	0.137	1.0	1.0	0.000
TOYOTA COROLLA	TRANSPLANT	CAR	1995	NO CHANGE	203980	206942	410922	-0.014	12498	12098	0.033	45.0	.	-0.034
TOYOTA COROLLA	TRANSPLANT	CAR	1996	NO CHANGE	216167	203980	420147	0.058	12728	12498	0.018	50.0	45.0	0.050
TOYOTA COROLLA	TRANSPLANT	CAR	1997	NO CHANGE	219165	216167	435332	0.014	13418	12728	0.053	50.0	50.0	0.000
TOYOTA COROLLA	TRANSPLANT	CAR	1998	NO CHANGE	237621	219165	456786	0.081	12328	13418	-0.085	55.0	50.0	0.050
TOYOTA TERCEL	IMPORT	CAR	1995	NO CHANGE	83344	88083	171427	-0.055	10198	8958	0.130	10.0	.	0.053
TOYOTA TERCEL	IMPORT	CAR	1996	NO CHANGE	60104	83344	143448	-0.327	10348	10198	0.015	10.0	10.0	0.000
TOYOTA TERCEL	IMPORT	CAR	1997	NO CHANGE	39130	60104	99234	-0.429	11118	10348	0.072	10.0	10.0	0.000
TOYOTA TERCEL	IMPORT	CAR	1998	LAST YR IT EXIST	3210	39130	42340	-2.501	13110	11118	0.165	10.0	10.0	0.000
TOYOTA CAMRY	TRANSPLANT	CAR	1995	NO CHANGE	319807	319317	639124	0.002	16128	16428	-0.018	55.0	.	0.066
TOYOTA CAMRY	TRANSPLANT	CAR	1996	LAST YR BF REDES	354035	319807	673842	0.102	16468	16128	0.021	55.0	55.0	0.000
TOYOTA CAMRY	TRANSPLANT	CAR	1997	REDES SAME NAME	385814	354035	739849	0.086	16868	16468	0.024	55.0	55.0	0.000
TOYOTA CAMRY	TRANSPLANT	CAR	1998	2ND YR AFT REDES	398548	385814	784362	0.032	17358	16868	0.029	55.0	55.0	0.000
TOYOTA AVALON	TRANSPLANT	CAR	1996	2ND YR IT EXIST	72033	56161	128194	0.249	23418	22988	0.019	60.0	60.0	0.000
TOYOTA AVALON	TRANSPLANT	CAR	1997	NO CHANGE	71040	72033	143073	-0.014	24028	23418	0.026	55.0	60.0	-0.050

MMG	NAME_PLT	VEH_TYP	CUR_YR	CHG_MODL	SALES_CY	SALES_PY	SALES_2Y	D_SALES	PRICE_CY	PRICE_PY	D_PRICE	USCAN_CY	USCAN_PY	D_USCAN
TOYOTA AVALON	TRANSPLANT	CAR	1998	NO CHANGE	78080	71040	149120	0.094	24828	24028	0.033	60.0	55.0	0.050
VOLVO 850/70	IMPORT	CAR	1995	NO CHANGE	58688	43584	102272	0.298	24935	24680	0.010	2.0	.	-0.027
VOLVO 850/70	IMPORT	CAR	1996	NO CHANGE	66591	58688	125279	0.126	26300	24935	0.053	2.0	2.0	0.000
VOLVO 850/70	IMPORT	CAR	1997	LAST YR BF RENAM	34061	66591	100652	-0.670	27560	26300	0.047	2.0	2.0	0.000
VOLVO 850/70	IMPORT	CAR	1998	REDES NEW NAME	82406	34061	116467	0.884	27560	27560	0.000	2.0	2.0	0.000
VOLVO 900/90	IMPORT	CAR	1995	NO CHANGE	28381	35097	63478	-0.212	23360	22900	0.020	2.0	.	-0.027
VOLVO 900/90	IMPORT	CAR	1996	NO CHANGE	19910	28381	48291	-0.354	33960	23360	0.374	2.0	2.0	0.000
VOLVO 900/90	IMPORT	CAR	1997	LAST YR BF RENAM	16268	19910	36178	-0.202	34875	33960	0.027	2.0	2.0	0.000
VOLVO 900/90	IMPORT	CAR	1998	LAST YR IT EXIST	11031	16268	27299	-0.388	34875	34875	0.000	0.0	2.0	-0.020
MITSUBISHI GALANT	TRANSPLANT	CAR	1995	2ND YR AFT REDES	62884	54816	117700	0.137	14349	13600	0.054	46.0	.	-0.024
MITSUBISHI GALANT	TRANSPLANT	CAR	1996	NO CHANGE	66373	62884	129257	0.054	14920	14349	0.039	45.0	46.0	-0.010
MITSUBISHI GALANT	TRANSPLANT	CAR	1997	NO CHANGE	47986	66373	114359	-0.324	15840	14920	0.060	45.0	45.0	0.000
MITSUBISHI GALANT	TRANSPLANT	CAR	1998	NO CHANGE	40537	47986	88523	-0.169	16100	15840	0.016	47.0	45.0	0.020
MITSUBISHI MIRAGE	IMPORT	CAR	1995	NO CHANGE	51702	37452	89154	0.322	9799	9179	0.065	5.0	.	0.003
MITSUBISHI MIRAGE	IMPORT	CAR	1996	NO CHANGE	25875	51702	77577	-0.692	10440	9799	0.063	5.0	5.0	0.000
MITSUBISHI MIRAGE	IMPORT	CAR	1997	NO CHANGE	34033	25875	59908	0.274	10990	10440	0.051	5.0	5.0	0.000
MITSUBISHI MIRAGE	IMPORT	CAR	1998	NO CHANGE	34016	34033	68049	-0.000	11250	10990	0.023	5.0	5.0	0.000
MITSUBISHI ECLIPSE	TRANSPLANT	CAR	1995	REDES SAME NAME	51296	50616	101912	0.013	14359	12099	0.171	72.0	.	0.236
MITSUBISHI ECLIPSE	TRANSPLANT	CAR	1996	2ND YR AFT REDES	61469	51296	112765	0.181	14970	14359	0.042	71.0	72.0	-0.010
MITSUBISHI ECLIPSE	TRANSPLANT	CAR	1997	NO CHANGE	61310	61469	122779	-0.003	14250	14970	-0.049	56.0	71.0	-0.150
MITSUBISHI ECLIPSE	TRANSPLANT	CAR	1998	NO CHANGE	59231	61310	120541	-0.034	16160	14250	0.126	72.0	56.0	0.160
ACURA INTEGRA	IMPORT	CAR	1995	NO CHANGE	60428	67928	128356	-0.117	15700	14820	0.058	5.0	.	0.003
ACURA INTEGRA	IMPORT	CAR	1996	NO CHANGE	50554	60428	110982	-0.178	16100	15700	0.025	5.0	5.0	0.000
ACURA INTEGRA	IMPORT	CAR	1997	NO CHANGE	43245	50554	93799	-0.156	16535	16100	0.027	5.0	5.0	0.000
ACURA INTEGRA	IMPORT	CAR	1998	NO CHANGE	34292	43245	77537	-0.232	16635	16535	0.006	0.0	5.0	-0.050
ACURA LEGEND	IMPORT	CAR	1995	LAST YR IT EXIST	21203	38485	59688	-0.596	36100	33800	0.066	5.0	.	0.003
ACURA TL	IMPORT	CAR	1997	2ND YR IT EXIST	24004	25363	49367	-0.055	28885	27900	0.035	0.0	0.0	0.000
ACURA TL	IMPORT	CAR	1998	LAST YR BF REDES	23119	24004	47123	-0.038	31135	28885	0.075	0.0	0.0	0.000
ACURA CL	TRANSPLANT	CAR	1998	NO CHANGE	27249	29873	57122	-0.092	22745	22545	0.009	70.0	65.0	0.050
HYUNDAI ELANTRA	IMPORT	CAR	1995	LAST YR BF REDES	37375	44665	82040	-0.178	10299	9799	0.050	5.0	.	0.003
HYUNDAI ELANTRA	IMPORT	CAR	1996	REDES SAME NAME	37703	37375	75078	0.009	10899	10299	0.057	5.0	5.0	0.000
HYUNDAI ELANTRA	IMPORT	CAR	1997	2ND YR AFT REDES	39298	37703	77001	0.041	11514	10899	0.055	1.0	5.0	-0.040
HYUNDAI ELANTRA	IMPORT	CAR	1998	NO CHANGE	42086	39298	81384	0.069	11934	11514	0.036	1.0	1.0	0.000
EXCEL/ACCENT	IMPORT	CAR	1995	REDES NEW NAME	46878	52831	99709	-0.120	8079	7290	0.103	10.0	.	0.053
EXCEL/ACCENT	IMPORT	CAR	1996	2ND YR AFT REDES	52746	46878	99624	0.118	8285	8079	0.025	5.0	10.0	-0.050
EXCEL/ACCENT	IMPORT	CAR	1997	NO CHANGE	38552	52746	91298	-0.313	9014	8285	0.084	1.0	5.0	-0.040

MMG	NAME_PLT	VEH_TYP	CURR_YR	CHG_MODL	SALES_CY	SALES_PY	SALES_2Y	D_SALES	PRICE_CY	PRICE_PY	D_PRICE	USCAN_CY	USCAN_PY	D_USCAN
EXCEL/ACCENT	IMPORT	CAR	1998	NO CHANGE	36439	38552	74991	-0.056	9534	9014	0.056	1.0	1.0	0.000
INFINITI I30	IMPORT	CAR	1997	2ND YR IT EXIST	29062	27839	56901	0.043	29295	28420	0.030	5.0	5.0	0.000
INFINITI I30	IMPORT	CAR	1998	NO CHANGE	27389	29062	56451	-0.059	29395	29295	0.003	5.0	5.0	0.000
LEXUS ES	IMPORT	CAR	1995	NO CHANGE	40265	37855	78120	0.062	31500	31200	0.010	10.0	.	0.053
LEXUS ES	IMPORT	CAR	1996	LAST YR BF REDES	42195	40265	82460	0.047	32400	31500	0.028	10.0	10.0	0.000
LEXUS ES	IMPORT	CAR	1997	REDES SAME NAME	59887	42195	102082	0.350	30485	32400	-0.061	15.0	10.0	0.050
LEXUS ES	IMPORT	CAR	1998	2ND YR AFT REDES	48891	59887	108778	-0.203	31285	30485	0.026	10.0	15.0	-0.050
LEXUS LS	IMPORT	CAR	1995	REDES SAME NAME	22230	22736	44966	-0.023	51200	51200	0.000	5.0	.	0.003
LEXUS LS	IMPORT	CAR	1996	2ND YR AFT REDES	23460	22230	45690	0.054	52900	51200	0.033	5.0	5.0	0.000
LEXUS LS	IMPORT	CAR	1997	NO CHANGE	19524	23460	42984	-0.184	53395	52900	0.009	0.0	5.0	-0.050
LEXUS LS	IMPORT	CAR	1998	NO CHANGE	21189	19524	40713	0.082	53695	53395	0.006	0.0	0.0	0.000
KIA SEPHIA	IMPORT	CAR	1995	NO CHANGE	15521	8629	24150	0.587	8895	8495	0.046	5.0	.	0.003
KIA SEPHIA	IMPORT	CAR	1996	NO CHANGE	25679	15521	41200	0.503	9495	8895	0.065	5.0	5.0	0.000
KIA SEPHIA	IMPORT	CAR	1997	NO CHANGE	30259	25679	55938	0.164	10220	9495	0.074	5.0	5.0	0.000
KIA SEPHIA	IMPORT	CAR	1998	LAST YR BF REDES	55867	30259	86126	0.613	10445	10220	0.022	1.0	5.0	-0.040
JEEP CHEROKEE	BIG 3	SUV	1995	NO CHANGE	114928	119085	234013	-0.036	13900	13427	0.035	84.0	.	-0.061
JEEP CHEROKEE	BIG 3	SUV	1996	NO CHANGE	145742	114928	260670	0.238	14745	13900	0.059	79.0	84.0	-0.050
JEEP CHEROKEE	BIG 3	SUV	1997	NO CHANGE	124949	145742	270691	-0.154	15825	14745	0.071	76.0	79.0	-0.030
JEEP CHEROKEE	BIG 3	SUV	1998	NO CHANGE	143786	124949	268735	0.140	16065	15825	0.015	74.0	76.0	-0.020
JEEP WRANGLER	BIG 3	SUV	1995	NO CHANGE	68619	72584	141203	-0.056	11995	11480	0.044	90.0	.	-0.001
JEEP WRANGLER	BIG 3	SUV	1996	NO CHANGE	74183	68619	142802	0.078	12985	11995	0.079	90.0	90.0	0.000
JEEP WRANGLER	BIG 3	SUV	1997	NO CHANGE	84270	74183	158453	0.127	13995	12985	0.075	86.0	90.0	-0.040
JEEP WRANGLER	BIG 3	SUV	1998	NO CHANGE	82098	84270	166368	-0.026	14615	13995	0.043	81.0	86.0	-0.050
JEEP GRAND CHEROKEE	BIG 3	SUV	1995	NO CHANGE	248418	238893	487311	0.039	23143	21156	0.090	93.0	.	0.029
JEEP GRAND CHEROKEE	BIG 3	SUV	1996	NO CHANGE	269511	248418	517929	0.081	24093	23143	0.040	92.0	93.0	-0.010
JEEP GRAND CHEROKEE	BIG 3	SUV	1997	NO CHANGE	267609	269511	537120	-0.007	26070	24093	0.079	85.0	92.0	-0.070
JEEP GRAND CHEROKEE	BIG 3	SUV	1998	COMPETITOR INTRO	238478	267609	506087	-0.115	26470	26070	0.015	84.0	85.0	-0.010
DODGE RAM VAN	BIG 3	VAN	1995	NO CHANGE	73470	86539	160009	-0.164	14561	13412	0.082	90.8	.	0.007
DODGE RAM VAN	BIG 3	VAN	1996	NO CHANGE	77007	73470	150477	0.047	16893	14561	0.149	87.0	90.8	-0.038
DODGE RAM VAN	BIG 3	VAN	1997	NO CHANGE	82166	77007	159173	0.065	18194	16893	0.074	86.3	87.0	-0.007
DODGE RAM VAN	BIG 3	VAN	1998	NO CHANGE	64626	82166	146792	-0.240	19074	18194	0.047	87.8	86.3	0.015
DODGE DAKOTA	BIG 3	P/U	1995	NO CHANGE	116396	105909	222305	0.094	10286	9600	0.069	93.0	.	0.029
DODGE DAKOTA	BIG 3	P/U	1996	NO CHANGE	105929	116396	222325	-0.094	11075	10286	0.074	89.0	93.0	-0.040
DODGE DAKOTA	BIG 3	P/U	1997	NO CHANGE	125236	105929	231165	0.167	13235	11075	0.178	85.0	89.0	-0.040
DODGE DAKOTA	BIG 3	P/U	1998	NO CHANGE	150745	125236	275981	0.185	13485	13235	0.019	86.0	85.0	0.010
CARAVAN/VOYAGER/T&C	BIG 3	VAN	1995	LAST YR BF REDES	486213	532860	1019073	-0.092	17044	16300	0.045	89.0	.	-0.011

MMG	NAME_PLT	VEH_TYP	CUR_YR	CHG_MODL	SALES_CY	SALES_PY	SALES_2Y	D_SALES	PRICE_CY	PRICE_PY	D_PRICE	USCAN_CY	USCAN_PY	D_USCAN
CARAVAN/VOYAGER/T&C	BIG 3	VAN	1996	REDES SAME NAME	542715	486213	1028928	0.110	17875	17044	0.048	86.2	89.0	-0.028
CARAVAN/VOYAGER/T&C	BIG 3	VAN	1997	2ND YR AFT REDES	521649	542715	1064364	-0.040	19184	17875	0.071	80.3	86.2	-0.059
CARAVAN/VOYAGER/T&C	BIG 3	VAN	1998	NO CHANGE	522710	521649	1044359	0.002	19320	19184	0.007	80.1	80.3	-0.001
DODGE RAM PICKUP	BIG 3	P/U	1995	2ND YR AFT REDES	253189	206370	459559	0.204	13188	12734	0.035	86.0	.	-0.041
DODGE RAM PICKUP	BIG 3	P/U	1996	NO CHANGE	369073	253189	622262	0.377	13741	13188	0.041	77.0	86.0	-0.090
DODGE RAM PICKUP	BIG 3	P/U	1997	NO CHANGE	350037	369073	719110	-0.053	14715	13741	0.068	76.0	77.0	-0.010
DODGE RAM PICKUP	BIG 3	P/U	1998	NO CHANGE	394958	350037	744995	0.121	15125	14715	0.027	74.0	76.0	-0.020
FORD F-SERIES	BIG 3	P/U	1995	NO CHANGE	698418	630409	1328827	0.102	13287	12348	0.073	90.0	.	-0.001
FORD F-SERIES	BIG 3	P/U	1996	LAST YR BF REDES	767141	698418	1465559	0.094	14150	13287	0.063	90.0	90.0	0.000
FORD F-SERIES	BIG 3	P/U	1997	REDES SAME NAME	751492	767141	1518633	-0.021	15145	14150	0.068	90.0	90.0	0.000
FORD F-SERIES	BIG 3	P/U	1998	2ND YR AFT REDES	807604	751492	1559096	0.072	15475	15145	0.022	95.0	90.0	0.050
BRONCO/EXPEDTN/NAVIGTR	BIG 3	SUV	1995	NO CHANGE	34825	34406	69231	0.012	21985	21725	0.012	95.0	.	0.049
BRONCO/EXPEDTN/NAVIGTR	BIG 3	SUV	1996	LAST YR BF RENAM	44655	34825	79480	0.249	22840	21985	0.038	95.0	95.0	0.000
BRONCO/EXPEDTN/NAVIGTR	BIG 3	SUV	1997	REDES NEW NAME	217403	44655	262058	1.583	28929	22840	0.236	85.3	95.0	-0.097
BRONCO/EXPEDTN/NAVIGTR	BIG 3	SUV	1998	2ND YR AFT REDES	260119	217403	477522	0.179	30712	28929	0.060	94.2	85.3	0.088
FORD AEROSTAR	BIG 3	VAN	1995	COMPETITOR INTRO	98239	177944	276183	-0.594	16725	15150	0.099	85.0	.	-0.051
FORD AEROSTAR	BIG 3	VAN	1996	NO CHANGE	81403	98239	179642	-0.188	16725	16725	0.000	85.0	85.0	0.000
FORD AEROSTAR	BIG 3	VAN	1997	LAST YR IT EXIST	55071	81403	136474	-0.391	17815	16725	0.063	80.0	85.0	-0.050
EXPLORER/MOUNTAINEER	BIG 3	SUV	1995	LAST YR BF REDES	345427	299245	644672	0.144	18985	17470	0.083	80.0	.	-0.101
EXPLORER/MOUNTAINEER	BIG 3	SUV	1996	REDES SAME NAME	404658	345427	750085	0.158	19570	18985	0.030	75.0	80.0	-0.050
EXPLORER/MOUNTAINEER	BIG 3	SUV	1997	ADDL NAME INTROD	431795	404658	836453	0.065	21376	19570	0.088	76.6	75.0	0.016
EXPLORER/MOUNTAINEER	BIG 3	SUV	1998	NO CHANGE	454059	431795	885854	0.050	21125	21376	-0.012	81.1	76.6	0.044
FORD ECONOLINE	BIG 3	VAN	1995	NO CHANGE	199896	198212	398108	0.008	17085	16348	0.044	90.0	.	-0.001
FORD ECONOLINE	BIG 3	VAN	1996	NO CHANGE	178979	199896	378875	-0.111	17640	17085	0.032	95.0	90.0	0.050
FORD ECONOLINE	BIG 3	VAN	1997	NO CHANGE	185946	178979	364925	0.038	19370	17640	0.094	90.0	95.0	-0.050
FORD ECONOLINE	BIG 3	VAN	1998	NO CHANGE	200695	185946	386641	0.076	19885	19370	0.026	90.0	90.0	0.000
FORD RANGER	BIG 3	P/U	1995	NO CHANGE	315201	350900	666101	-0.107	10224	9449	0.079	80.0	.	-0.101
FORD RANGER	BIG 3	P/U	1996	NO CHANGE	290133	315201	605334	-0.083	10425	10224	0.019	85.0	80.0	0.050
FORD RANGER	BIG 3	P/U	1997	LAST YR BF REDES	292987	290133	583120	0.010	11480	10425	0.096	80.0	85.0	-0.050
FORD RANGER	BIG 3	P/U	1998	REDES SAME NAME	323086	292987	616073	0.098	11995	11480	0.044	80.0	80.0	0.000
FORD WINDSTAR	BIG 3	VAN	1996	2ND YR IT EXIST	198456	228620	427076	-0.141	18270	17745	0.029	90.0	95.0	-0.050
FORD WINDSTAR	BIG 3	VAN	1997	NO CHANGE	209717	198456	408173	0.055	19665	18270	0.074	90.0	90.0	0.000
FORD WINDSTAR	BIG 3	VAN	1998	NO CHANGE	195983	209717	405700	-0.068	18790	19665	-0.046	90.0	90.0	0.000
MERCURY VILLAGER	BIG 3	VAN	1995	NO CHANGE	74704	73070	147774	0.022	19045	18375	0.036	70.0	.	-0.201
MERCURY VILLAGER	BIG 3	VAN	1996	NO CHANGE	67795	74704	142499	-0.097	19385	19045	0.018	70.0	70.0	0.000
MERCURY VILLAGER	BIG 3	VAN	1997	NO CHANGE	59807	67795	127602	-0.125	20540	19385	0.058	60.0	70.0	-0.100

MMG	NAME_PLT	VEH_TYP	CURR_YR	CHG_MODL	SALES_CY	SALES_PY	SALES_2Y	D_SALES	PRICE_CY	PRICE_PY	D_PRICE	USCAN_CY	USCAN_PY	D_USCAN
MERCURY VILLAGER	BIG 3	VAN	1998	NO CHANGE	40183	59807	99990	-0.398	21030	20540	0.024	60.0	60.0	0.000
GM S/T PICKUP	BIG 3	P/U	1995	NO CHANGE	275726	288280	564006	-0.045	10524	9685	0.083	95.0	.	0.049
GM S/T PICKUP	BIG 3	P/U	1996	NO CHANGE	234491	275726	510217	-0.162	11274	10524	0.069	92.0	95.0	-0.030
GM S/T PICKUP	BIG 3	P/U	1997	NO CHANGE	240719	234491	475210	0.026	12116	11274	0.072	90.0	92.0	-0.020
GM S/T PICKUP	BIG 3	P/U	1998	NO CHANGE	268649	240719	509368	0.110	12511	12116	0.032	90.0	90.0	0.000
BLAZER/JIMMY/BRAVADA	BIG 3	SUV	1995	NO CHANGE	319486	226175	545661	0.345	18708	17044	0.093	95.0	.	0.049
BLAZER/JIMMY/BRAVADA	BIG 3	SUV	1996	NO CHANGE	322365	319486	641851	0.009	19758	18708	0.055	91.0	95.0	-0.040
BLAZER/JIMMY/BRAVADA	BIG 3	SUV	1997	NO CHANGE	337750	322365	660115	0.047	21895	19758	0.103	91.0	91.0	0.000
BLAZER/JIMMY/BRAVADA	BIG 3	SUV	1998	NO CHANGE	325842	337750	663592	-0.036	23001	21895	0.049	90.0	91.0	-0.010
ASTROVAN/SAFARI	BIG 3	VAN	1995	NO CHANGE	164897	177767	342664	-0.075	17828	16302	0.090	95.0	.	0.049
ASTROVAN/SAFARI	BIG 3	VAN	1996	NO CHANGE	163207	164897	328104	-0.010	18995	17828	0.063	95.0	95.0	0.000
ASTROVAN/SAFARI	BIG 3	VAN	1997	NO CHANGE	155764	163207	318971	-0.047	19655	18995	0.034	95.0	95.0	0.000
ASTROVAN/SAFARI	BIG 3	VAN	1998	NO CHANGE	126946	155764	282710	-0.205	19941	19655	0.014	90.0	95.0	-0.050
GM G VAN	BIG 3	VAN	1995	LAST YR BF REDES	127690	122986	250676	0.038	16927	15931	0.061	95.0	.	0.049
GM G VAN	BIG 3	VAN	1996	REDES SAME NAME	114140	127690	241830	-0.112	18658	16927	0.097	95.0	95.0	0.000
GM G VAN	BIG 3	VAN	1997	2ND YR AFT REDES	115723	114140	229863	0.014	19704	18658	0.055	95.0	95.0	0.000
GM G VAN	BIG 3	VAN	1998	NO CHANGE	118237	115723	233960	0.021	20148	19704	0.022	90.0	95.0	-0.050
GM C/K PICKUP	BIG 3	P/U	1995	NO CHANGE	720269	775057	1495326	-0.073	13454	12371	0.084	95.0	.	0.049
GM C/K PICKUP	BIG 3	P/U	1996	NO CHANGE	723791	720269	1444060	0.005	14033	13454	0.042	95.0	95.0	0.000
GM C/K PICKUP	BIG 3	P/U	1997	NO CHANGE	715316	723791	1439107	-0.012	15174	14033	0.078	91.5	95.0	-0.035
GM C/K PICKUP	BIG 3	P/U	1998	LAST YR BF RENAM	729239	715316	1444555	0.019	15671	15174	0.032	90.0	91.5	-0.015
GEO TRACKER	BIG 3	SUV	1996	NO CHANGE	47546	41566	89112	0.134	12970	11920	0.084	40.0	40.0	0.000
GEO TRACKER	BIG 3	SUV	1997	NO CHANGE	36726	47546	84272	-0.258	13755	12970	0.059	40.0	40.0	0.000
GEO TRACKER	BIG 3	SUV	1998	NO CHANGE	21672	36726	58398	-0.527	13995	13755	0.017	40.0	40.0	0.000
GM U VAN	BIG 3	VAN	1995	NO CHANGE	96585	92768	189353	0.040	17404	16943	0.027	92.0	.	0.019
GM U VAN	BIG 3	VAN	1996	LAST YR BF RENAM	70573	96585	167158	-0.314	18915	17404	0.083	95.0	92.0	0.030
GM U VAN	BIG 3	VAN	1997	REDES NEW NAME	120237	70573	190810	0.533	20957	18915	0.102	95.0	95.0	0.000
GM U VAN	BIG 3	VAN	1998	2ND YR AFT REDES	193582	120237	313819	0.476	21659	20957	0.033	75.0	95.0	-0.200
TAHOE/YUKON	BIG 3	SUV	1995	NO CHANGE	80773	32556	113329	0.909	22048	21349	0.032	95.0	.	0.049
TAHOE/YUKON	BIG 3	SUV	1996	NO CHANGE	159471	80773	240244	0.680	22886	22048	0.037	95.0	95.0	0.000
TAHOE/YUKON	BIG 3	SUV	1997	NO CHANGE	155198	159471	314669	-0.027	24163	22886	0.054	90.0	95.0	-0.050
TAHOE/YUKON	BIG 3	SUV	1998	NO CHANGE	182918	155198	338116	0.164	26066	24163	0.076	86.0	90.0	-0.040
GM SUBURBAN	BIG 3	SUV	1995	NO CHANGE	117217	120102	237319	-0.024	21907	20425	0.070	95.0	.	0.049
GM SUBURBAN	BIG 3	SUV	1996	NO CHANGE	125474	117217	242691	0.068	24027	21907	0.092	95.0	95.0	0.000
GM SUBURBAN	BIG 3	SUV	1997	NO CHANGE	138912	125474	264386	0.102	25343	24027	0.053	95.0	95.0	0.000
GM SUBURBAN	BIG 3	SUV	1998	NO CHANGE	151066	138912	289978	0.084	26313	25343	0.038	85.0	95.0	-0.100

MMG	NAME_PLT	VEH_TYP	CURR_YR	CHG_MODL	SALES_CY	SALES_PY	SALES_2Y	D_SALES	PRICE_CY	PRICE_PY	D_PRICE	USCAN_CY	USCAN_PY	D_USCAN
NISSAN PICKUP	TRANSPLANT	P/U	1995	NO CHANGE	134101	120721	254822	0.105	9999	9459	0.056	30.0	.	-0.184
NISSAN PICKUP	TRANSPLANT	P/U	1996	NO CHANGE	121240	134101	255341	-0.101	10999	9999	0.095	30.0	30.0	0.000
NISSAN PICKUP	TRANSPLANT	P/U	1997	NO CHANGE	123619	121240	244859	0.019	11469	10999	0.042	40.0	30.0	0.100
NISSAN PICKUP	TRANSPLANT	P/U	1998	NO CHANGE	93362	123619	216981	-0.281	12480	11469	0.084	45.0	40.0	0.050
PATHFINDER/QX4	IMPORT	SUV	1995	LAST YR BF REDES	69523	58242	127765	0.177	21019	19669	0.066	0.0	.	-0.047
PATHFINDER/QX4	IMPORT	SUV	1996	REDES SAME NAME	71914	69523	141437	0.034	22399	21019	0.064	5.0	0.0	0.050
PATHFINDER/QX4	IMPORT	SUV	1997	ADDL NAME INTROD	93598	71914	165512	0.264	25424	22399	0.127	5.0	5.0	0.000
PATHFINDER/QX4	IMPORT	SUV	1998	NO CHANGE	85650	93598	179248	-0.089	26893	25424	0.056	5.0	5.0	0.000
NISSAN QUEST	TRANSPLANT	VAN	1995	NO CHANGE	53668	48794	102462	0.095	19839	19079	0.039	70.0	.	0.216
NISSAN QUEST	TRANSPLANT	VAN	1996	NO CHANGE	47526	53668	101194	-0.122	20899	19839	0.052	70.0	70.0	0.000
NISSAN QUEST	TRANSPLANT	VAN	1997	NO CHANGE	45913	47526	93439	-0.035	21719	20899	0.038	60.0	70.0	-0.100
NISSAN QUEST	TRANSPLANT	VAN	1998	NO CHANGE	32706	45913	78619	-0.339	23589	21719	0.083	60.0	60.0	0.000
ISUZU RODEO	TRANSPLANT	SUV	1995	NO CHANGE	59560	58161	117721	0.024	15840	15089	0.049	35.0	.	-0.134
ISUZU RODEO	TRANSPLANT	SUV	1996	NO CHANGE	63997	59560	123557	0.072	17340	15840	0.090	40.0	35.0	0.050
ISUZU RODEO	TRANSPLANT	SUV	1997	LAST YR BF REDES	61931	63997	125928	-0.033	17785	17340	0.025	40.0	40.0	0.000
ISUZU RODEO	TRANSPLANT	SUV	1998	REDES SAME NAME	59336	61931	121267	-0.043	18440	17785	0.036	55.0	40.0	0.150
MAZDA PICKUP	TRANSPLANT	P/U	1995	2ND YR IT EXIST	47244	58177	105421	-0.208	10270	9460	0.082	80.0	.	0.316
MAZDA PICKUP	TRANSPLANT	P/U	1996	NO CHANGE	42627	47244	89871	-0.103	9925	10270	-0.034	85.0	80.0	0.050
MAZDA PICKUP	TRANSPLANT	P/U	1997	LAST YR BF REDES	38656	42627	81283	-0.098	10980	9925	0.101	75.0	85.0	-0.100
MAZDA PICKUP	TRANSPLANT	P/U	1998	REDES SAME NAME	39715	38656	78371	0.027	11395	10980	0.037	80.0	75.0	0.050
TOYOTA PICKUP	TRANSPLANT	P/U	1995	REDES NEW NAME	160737	195380	356117	-0.195	10348	10118	0.022	25.0	.	-0.234
TOYOTA PICKUP	TRANSPLANT	P/U	1996	2ND YR AFT REDES	144499	160737	305236	-0.106	12028	10348	0.150	45.0	25.0	0.200
TOYOTA PICKUP	TRANSPLANT	P/U	1997	NO CHANGE	139963	144499	284462	-0.032	12658	12028	0.051	45.0	45.0	0.000
TOYOTA PICKUP	TRANSPLANT	P/U	1998	NO CHANGE	153873	139963	293836	0.095	12958	12658	0.023	45.0	45.0	0.000
TOYOTA 4-RUNNER	IMPORT	SUV	1995	LAST YR BF REDES	76351	68208	144559	0.113	21518	20308	0.058	5.0	.	0.003
TOYOTA 4-RUNNER	IMPORT	SUV	1996	REDES SAME NAME	93056	76351	169407	0.198	19488	21518	-0.099	10.0	5.0	0.050
TOYOTA 4-RUNNER	IMPORT	SUV	1997	2ND YR AFT REDES	124176	93056	217232	0.288	20408	19488	0.046	10.0	10.0	0.000
TOYOTA 4-RUNNER	IMPORT	SUV	1998	NO CHANGE	116577	124176	240753	-0.063	21078	20408	0.032	10.0	10.0	0.000
TOYOTA T-100	IMPORT	P/U	1995	NO CHANGE	32051	14032	46083	0.826	13788	12998	0.059	10.0	.	0.053
TOYOTA T-100	IMPORT	P/U	1996	NO CHANGE	37587	32051	69638	0.159	14448	13788	0.047	20.0	10.0	0.100
TOYOTA T-100	IMPORT	P/U	1997	NO CHANGE	33806	37587	71393	-0.106	15098	14448	0.044	15.0	20.0	-0.050
TOYOTA T-100	IMPORT	P/U	1998	LAST YR IT EXIST	10702	33806	44508	-1.150	15318	15098	0.014	15.0	15.0	0.000
TOYOTA RAV4	IMPORT	SUV	1997	2ND YR IT EXIST	66732	41242	107974	0.481	15538	14948	0.039	10.0	5.0	0.050
TOYOTA RAV4	IMPORT	SUV	1998	NO CHANGE	65260	66732	131992	-0.022	15858	15538	0.020	5.0	10.0	-0.050
MITSUBISHI MONTERO	IMPORT	SUV	1995	NO CHANGE	19114	13263	32377	0.365	27625	24225	0.131	2.0	.	-0.027
MITSUBISHI MONTERO	IMPORT	SUV	1996	NO CHANGE	13352	19114	32466	-0.359	28470	27625	0.030	2.0	2.0	0.000

MMG	NAME_PLT	VEH_TYP	CURR_YR	CHG_MODL	SALES_CY	SALES_PY	SALES_2Y	D_SALES	PRICE_CY	PRICE_PY	D_PRICE	USCAN_CY	USCAN_PY	D_USCAN
MITSUBISHI MONTERO	IMPORT	SUV	1997	ADDL NAME INTROD	31566	13352	44918	0.860	18065	28470	-0.455	7.0	2.0	0.050
MITSUBISHI MONTERO	IMPORT	SUV	1998	NO CHANGE	40892	31566	72458	0.259	18475	18065	0.022	1.0	7.0	-0.060
HONDA PASSPORT	TRANSPLANT	SUV	1995	2ND YR IT EXIST	29016	17148	46164	0.526	16330	15660	0.042	35.0	.	-0.134
HONDA PASSPORT	TRANSPLANT	SUV	1996	NO CHANGE	29006	29016	58022	-0.000	17990	16330	0.097	40.0	35.0	0.050
HONDA PASSPORT	TRANSPLANT	SUV	1997	LAST YR BF REDES	24619	29006	53625	-0.164	21865	17990	0.195	40.0	40.0	0.000
HONDA PASSPORT	TRANSPLANT	SUV	1998	REDES SAME NAME	24677	24619	49296	0.002	23095	21865	0.055	55.0	40.0	0.150
HONDA ODYSSEY	IMPORT	VAN	1996	2ND YR IT EXIST	29101	19096	48197	0.421	23560	23215	0.015	5.0	5.0	0.000
HONDA ODYSSEY	IMPORT	VAN	1997	NO CHANGE	21897	29101	50998	-0.284	23955	23560	0.017	5.0	5.0	0.000
HONDA ODYSSEY	IMPORT	VAN	1998	LAST YR BF REDES	16029	21897	37926	-0.312	24205	23955	0.010	5.0	5.0	0.000
HONDA CR-V	IMPORT	SUV	1998	2ND YR IT EXIST	91700	50959	142659	0.588	18745	19695	-0.049	5.0	0.0	0.050
LAND ROVER	IMPORT	SUV	1995	NO CHANGE	17901	9179	27080	0.668	28650	27900	0.027	0.0	.	-0.047
LAND ROVER	IMPORT	SUV	1996	NO CHANGE	23362	17901	41263	0.266	29950	28650	0.044	0.0	0.0	0.000
LAND ROVER	IMPORT	SUV	1997	NO CHANGE	24704	23362	48066	0.056	32625	29950	0.086	0.0	0.0	0.000
LAND ROVER	IMPORT	SUV	1998	NO CHANGE	20686	24704	45390	-0.178	35625	32625	0.088	0.0	0.0	0.000

APPENDIX C

REQUEST FOR PUBLIC COMMENT ON PROPOSED COLLECTION OF INFORMATION

[Federal Register: July 24, 1997 (Volume 62, Number 142)]
[Notices]
[Page 39886]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr24jy97-134]

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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration
[Docket No. 92-64; Notice 12]

Reports, Forms, and Recordkeeping Requirements

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Request for public comment on proposed collections of information.

SUMMARY: Before a Federal agency can collect certain information from the public, it must receive approval from the Office of Management and Budget (OMB). Under procedures established by the Paperwork Reduction Act of 1995, before seeking OMB approval, Federal Agencies must solicit public comment on the proposed collections of information, including extensions and reinstatements of previously approved collections.

DATES: Comments must be received on or before September 22, 1997.

ADDRESSES. Comments must refer to the docket and notice numbers cited at the beginning of this notice and be submitted to the Docket Section, Room 5109, 400 Seventh Street, SW., Washington, DC 20590. It is requested, but not required, that one original plus two copies of the comments be provided. The Docket hours are from 9:30 a.m. to 4 p.m., Monday through Friday.

FOR FURTHER INFORMATION CONTACT: Complete copies of each NHTSA request for collection of information may be obtained at no charge from Mr. Edward Kosek, NHTSA Information Collection Clearance Officer, NHTSA, 400 Seventh Street SW, Washington, DC 20590. Mr. Kosek's telephone number is (202) 366-2589. Please identify the relevant collection of information by referring to its OMB Clearance Number.

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995, before an agency submits a proposed collection of information to OMB for approval, it must publish a document in the Federal Register providing a 60-day comment period and otherwise consult with members of the public and affected agencies concerning each proposed collection of information. The OMB has promulgated regulations describing what must be included in such a document. Under OMB's regulations (at 5 CFR 1320.8(d)), an agency must ask for public comment on the following:

(i) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(ii) The accuracy of the agency's estimates of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(iii) How to enhance the quality, utility, and clarity of information to be collected; and

(iv) How to minimize the burden of the collection of information on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses. In compliance with these requirements, NHTSA asks public comment on the following proposed collections of information:

Title--American Automobile Labeling Act.

Type of Request--New collection.

OMB Clearance Number--New collection.

Form Number--This collection of information uses no standard forms.

Requested Expiration Date of Approval--Three years from approval date.

Summary of the Collection of Information--NHTSA will conduct three surveys to collect information from potential and actual purchasers of new passenger cars, light trucks, and multipurpose passenger vehicles; new vehicle dealers; and domestic and foreign-based manufacturers of these vehicles.

Description of the Need for the Information and Proposed Use of the Information--Under Executive Order 12866, ``Regulatory Planning and Review'' NHTSA is required to conduct periodic evaluations to assess the effectiveness of its existing regulations and programs. Since this regulation has been in effect for at least a full year, NHTSA intends to collect data through the administration of three surveys, to evaluate the effectiveness of the American Automobile Labeling Act.

Description of the Likely Respondents (Including Estimated Number, and Proposed Frequency of Response to the Collection of Information--NHTSA estimates that at least 6,250 telephone calls will be made to consumers, with a target for successfully completed responses of 800 persons. NHTSA estimates that 300 vehicle dealers will be contacted to obtain 200 completed responses. NHTSA anticipates that about 23 vehicle manufacturers will be affected by the reporting requirements. NHTSA does not believe any of these manufacturers is a small business (i.e., one that employs less than 500 persons) since each manufacturer employs more than 500 persons. Each of the surveys is a one-time collection.

Estimate of the Total Annual Reporting and Recordkeeping Burden Resulting from the Collection of Information--NHTSA estimates that the total reporting burden for consumers will amount to approximately 224 hours. The total information collection burden on dealers will amount to approximately 1,650 hours, and the total information collection burden on all manufacturers will amount to approximately 230 hours. The total reporting burden for this project is estimated at 2,104 hours; the total recordkeeping costs for the one-time collection of information is estimated at $53,705.00

.Issued on: July 18, 1997.

William H. Walsh,
Associate Administrator for Plans and Policy.

[FR Doc. 97-19518 Filed 7-23-97; 8:45 am]

BILLING CODE 4910-59-P

APPENDIX D

CONSUMER SURVEY QUESTIONNAIRE

Questions nos. 22 and 24 in the consumer survey were omitted from the analyses in this report subsequent to legislation amending domestic content cost procedures (Transportation Equity Act For the 21st Century, TEA-21) and industry discussions.

Chilton Research Services
A division of TNS Intersearh

#DL8107
Fall 1998

New Vehicle Labeling Study-- Consumer Survey Questionnaire

(INTERVIEWER: IF NECESSARY, VERIFY YOU ARE SPEAKING TO AN ADULT, 18+)

INTRODUCTION: Hello, I'm ______________________________
calling from Chilton Research Services. We are conducting a survey about automobiles and would like to include you or someone in your household among the people who get to express their opinion.

[IF Q.S5 WAS ASKED ON A PREVIOUS CALL, INSERT BEFORE INTRODUCTION: May I please speak to (FILL NAME FROM Q.S5)?

[GOVERNMENT CODING: DON'T KNOW = 8 OR 98 AND REFUSED = 9 OR 99]

[1 OUT OF 10 RESPONDENTS WHO DO NOT SCREEN IN (Q.S1=2/D/R AND Q.S2=2/D/R) WILL BE ASKED DEMOGRAPHIC QUESTIONS ONLY. THESE ARE CONSIDERED SHORT COMPLETES.]

2/70
QUOTAS:
1 PURCHASERS (Q.S1=1 AND Q.S3=1)
2 WILL PURCHASE (PLANNERS) (Q.S2=1 AND Q.S3=1)
3 SHORT COMPLETES (Q.S1=2/D/R, Q.S2=2/D/R AND COMPLETED DEMOGRAPHICS)

[AFTER WE HAVE REACHED THE QUOTA FOR EITHER ONE OF THESE CATEGORIES, WE DO NOT WANT TO ASK THAT QUESTION ANYMORE. FOR EXAMPLE, IF WE REACH OUR COMPLETES FOR **PURCHASERS**, WE DO NOT WANT TO ASK Q.S1 ANYMORE. WE WILL JUST ASK Q.S2 FOR ALL RESPONDENTS FROM THAT POINT ON.]

[IF QUOTA FOR PURCHASERS IS FULL, SKIP TO Q.S2]
2/71
S1. In the past six months have you or someone else in your household purchased or leased a NEW car, truck, van, or sport utility vehicle? By new we mean Model Year 1998, 1999 or 2000. Please do not include the purchase of a "used" vehicle.

1 Yes
2 No
8 Don't know
9 Refused

[IF Q.S1 = 1, SKIP TO Q.S3.]

2/72

S2. In the next three months, do you or does anyone else in your household plan to purchase or lease a NEW car, truck, van, or sport utility vehicle? Remember, by new we mean Model Year 1998, 1999 or 2000. Please do not include the purchase of a "used" vehicle.

1 Yes
2 No
8 Don't know
9 Refused

[IF S2 = 1, CONTINUE. IF Q.S2 = 2, 3, D OR R, SKIP 1 OUT OF EVERY 10 RESPONDENTS TO Q.D1, TERMINATE ALL OTHERS.]

2/75

[IF Q.S2 = 1, FILL VERBIAGE IN PARENTHESES]

S3. Are you the person who was (will be) most responsible for making that purchase or lease decision? (INTERVIEWER: IF MORE THAN ONE PERSON RESPONSIBLE, ASK TO SPEAK TO THE ONE WHO LAST HAD A BIRTHDAY).

1 Yes
2 No
8 Don't know
9 Refused

[IF Q.S3 = 1, SKIP TO Q.1. IF Q.S3 = D OR R, TERMINATE]

[IF Q.S2 = 1, FILL VERBIAGE IN PARENTHESES]

S4. May I please speak to the person who was (will be) most responsible for making that purchase or lease decision?

1 Yes, person is coming to the phone
2 No, person is not available right now
8 Don't know
9 Refused

[IF Q.S4 = 1, REPEAT INTRODUCTION AND RE-ASK Q.S1 AND Q.S2.]
[If Q.S4 = D OR R, TERMINATE.]

S5. May I please have that person's name so that when I call back I know who to ask for? (INTERVIEWER: ASK WHEN IS THE BEST TIME TO REACH THIS PERSON.]

[SET UP CALL BACK]

01. I am going to read you a number of reasons why people choose to buy or lease a new vehicle. For each one, please tell me whether or not it is an important reason why you would buy or lease a new vehicle? (READ ITEM) Is that an important reason or not an important reason why you would buy or lease a new vehicle?

Yes, important	1
No, not important	2
Don't know	8
Refused	9

[ROTATE LIST OF ATTRIBUTES]

3/8 A. How the vehicle drives
3/9 B. The style or look of the vehicle
3/10 C. That it is made in the USA or Canada
3/11 D. That it is a foreign vehicle
3/12 E. The price of the vehicle
3/13 F. The reliability
3/14 G. The fuel economy
3/15 H. The vehicle size
3/16 I. Optional equipment
3/17 J. It's the brand I always buy
3/18 K. Brand Image
3/19 L. Safety
3/20 M. Dealer Reputation
3/21 N. Manufacturer Reputation
3/22 O. Cargo Capacity

[REPRESENT ATTRIBUTES CHOSEN AS IMPORTANT IN Q.01 (ATTRIBUTE=CODE 1); IF ONLY ONE RESPONSE IN Q.01, INSERT RESPONSE FROM Q.01 INTO Q.02 AND SKIP TO Q.03]

[ACCEPT ONLY ONE RESPONSE]
3/23-24
02. Of those you mentioned as important, what is the most important reason you would choose to buy or lease a new vehicle? (INTERVIEWER: READ LIST, IF NECESSARY. ACCEPT ONLY ONE RESPONSE.)

01 How the vehicle drives
02 The style or look of the vehicle
03 That it is made in the USA or Canada
04 That it is a foreign vehicle
05 The price of the vehicle
06 The reliability
07 The fuel economy
08 The vehicle size
09 Optional equipment
10 It's the brand I always buy
11 Brand Image
12 Safety
13 Dealer Reputation
14 Manufacturer Reputation
15 Cargo Capacity
16 Other (SPECIFY)
98 Don't know
99 Refused

For the next few questions, I'd like you to answer by using a scale from 1 to 7, where "1" means not at all important and "7" means very important. You may use any number in between.

3/25
03. When buying or leasing a new vehicle, how important is it to you to know in what country the vehicle's parts are manufactured? (IF NECESSARY READ: Please use a scale from to 1 to 7, where "1" means not at all important and "7" means very important.)

1 Not at all important
2
3
4
5
6
7 Very important
8 Don't know
9 Refused

[ASK HALF OF THE RESPONDENTS Q.04 AND HALF Q.05]

3/27

04. Again, using the same 1 to 7 scale, please rate how important it is to you to know the percentage of the parts that were manufactured in one country versus another country? For example, 70 percent of the parts were manufactured in Country A and 30 percent of the parts were built in Country B. (IF NECESSARY, READ: A "1" means not at all important and "7" means very important).

1	Not at all important
2	
3	
4	
5	
6	
7	Very important
8	Don't know
9	Refused

[IF ASKED Q.04, SKIP TO Q.06]

3/28

05. Again, using the same 1 to 7 scale, please rate how important it is to you to know the percentage of the parts that were manufactured in one country versus another country? For example, 70 percent of the parts were manufactured in the United States and 30 percent of the parts were built in Japan. (IF NECESSARY, READ: A "1" means not at all important and "7" means very important).

1	Not at all important
2	
3	
4	
5	
6	
7	Very important
8	Don't know
9	Refused

3/29
06. Using the same 1 to 7 scale, please rate how important it is to you to know in what country the entire vehicle is built? (IF NECESSARY, READ: A "1" means not at all important and "7" means very important).

1	Not at all important
2	
3	
4	
5	
6	
7	Very important
8	Don't know
9	Refused

[IF Q.S1=1 ASK Q.07, OTHERWISE SKIP TO Q.11]

3/30-36
3/37-43
3/44-50
[ACCEPT UP TO 3 RESPONSES]
07. What is the make and model of the vehicle that you bought or leased in the last six months? Please tell me about new vehicles only, that is Model Year 1998, 1999 or 2000 vehicles. (IF RESPONDENT PURCHASED/LEASED MORE THAN ONE VEHICLE IN THE LAST SIX MONTHS RECORD ALL.)

INSERT NEW CARS AND LIGHT TRUCKS MAKE/MODEL LIST

[IF ONE RESPONSE IN Q.07, SKIP TO Q.09]
[IF MORE THAN ONE RESPONSE IN Q.07 ASK Q.08; REPRESENT RESPONSES FROM Q.07]

3/75
08. Which of these vehicles did you purchase most recently? (IF RESPONDENT SAYS VEHICLES WERE PURCHASED ON THE SAME DAY ASK: Which vehicle do you drive most often?)

3/76-77
09. What country do you think this vehicle was made in? (DO NOT READ LIST)

01	United States/U.S./America
02	Japan
03	Germany
04	Korea
05	Mexico
06	Italy
07	England/Great Britain
08	Canada
09	Venezuela
10	France
11	Other (SPECIFY)
98	Don't know
99	Refused

4/18
10. Did you purchase or lease this vehicle directly from a dealer or did you go through a service where you didn't have to go to a dealer?

1	Through dealer
2	Not through dealer
8	Don't Know
9	Refused

[IF Q.S2=1 ASK Q11. OTHERWISE, SKIP TO Q.13]

4/19-25
4/26-32
4/33-39
[ACCEPT UP TO 3 RESPONSES]

11. What are the makes and models of the vehicles that you are thinking about buying or leasing in the next three months? Please tell me about new vehicles only, that is Model Year 1998, 1999 or 2000 vehicles.

INSERT NEW CARS AND LIGHT TRUCKS MAKE/MODEL LIST

4/64

12. Are you planning to purchase or lease your vehicle directly from a dealer or do you plan to go through a service where you wouldn't have to go to a dealer?

1	Through dealer
2	Not through dealer
8	Don't Know
9	Refused

[REPRESENT ATTRIBUTES CHOSEN AS IMPORTANT (ATTRIBUTE=CODE 1) IN Q.01 AND ITEM P (US/CANADIAN PARTS CONTENT LABEL.) ITEM P SHOULD APPEAR FOR EVERY RESPONDENT. ROTATE ATTRIBUTES. USE VERBIAGE IN PARENTHESES IF Q.S2=1]

13. I am going to read you a list of factors people consider when buying or leasing a new vehicle. Please rate each one using a 1 to 7 scale, where "1" means it was (is) not at all a factor and "7" means it was(is) a very important factor to you when you bought (will buy) your last (next) vehicle. Here's the first: (READ ITEM:)

1	Not at all a factor
2	
3	
4	
5	
6	
7	Very important factor
8	Don't know
9	Refused

4/67 A. How the vehicle drives
4/68 B. The style or look of the vehicle
4/69 C. That it is made in the USA or Canada
4/70 D. That it is a foreign vehicle
4/71 E. The price of the vehicle
4/72 F. The reliability
4/73 G. The fuel economy
4/74 H. The vehicle size
4/75 I. Optional equipment
4/76 J. It's the brand I always buy
4/77 K. Brand Image
4/78 L. Safety
4/79 M. Dealer Reputation
4/80 N. Manufacturer Reputation
5/08 O. Cargo Capacity
5/09 P. The U.S./Canadian parts content label

5/10
14. Are there any other factors that I did not mention that you consider to be very important?

Yes	1
No	2
Don't know	8
Refused	9

[IF Q.14 = 2, D OR R, SKIP TO Q.16.]

8/46-47 thru 8/52-53

15. What are these factors?

(INTERVIEWER: TYPE IN RESPONSE. PROBE AND CLARIFY.)

16. I am now going to read you a list of different makes of cars and trucks. For each, please tell me in what country that vehicle is built? Just give me your best guess. Here's the first:

01 United States/U.S./America
02 Japan
03 Germany
04 Korea
05 Mexico
06 Italy
07 England/Great Britain
08 Canada
09 Venezuela
10 France
11 Other, SPECIFY
98 Don't know
99 Refused

[ROTATE LIST]
5/15-16 A. Acura Integra
5/17-18 B. Jaguar
5/19-20 C. Toyota Camry
5/21-22 D. Volkswagon Jetta
5/23-24 E. BMW Z3
5/25-26 F. Chevy Blazer
5/27-28 G. Ford Explorer

5/50-51
5/52-53
5/54-55
[ACCEPT UP TO THREE RESPONSES]

17. How would you find out if a vehicle was built in U.S./Canada or elsewhere? (DO NOT READ LIST)

    01 Parts Content Label
    02 Advertisement
    03 Sales Brochure
    04 Internet
    05 Magazine Article
    06 Newspaper Article
    07 Discussions with other people
    08 Other (SPECIFY)
    98 Don't know
    99 Refused

5/61

18. Have you heard or read about **a law** that requires car and truck dealers and manufacturers to place a label on all new vehicles showing in what country the vehicle and its parts were made?

    1 Yes, have heard or read
    2 No, have not heard or read
    8 Don't know
    9 Refused

5/62

19. Have you heard or read about the parts content label?

    1 Yes, have heard or read
    2 No, have not heard or read
    8 Don't know
    9 Refused

[IF Q.19 = 2, D OR R, SKIP TO Q.32.]

5/63

20. Have you ever seen this label?

    1 Yes
    2 No
    8 Don't know
    9 Refused

9/8-9 thru 9/14-15

21. What do you think the numbers on the label mean?

(INTERVIEWER: TYPE IN RESPONSE. PROBE AND CLARIFY.)

8 Don't know
9 Refused

22. To the best of your knowledge, is a part made in (READ COUNTRY) included on the parts content label as being made in America, or not?

1 Yes
2 No
8 Don't know
9 Refused

5/68 A. Canada
5/69 B. Mexico

5/77

23. To the best of your knowledge, if a foreign car is built in the United States, does the U.S./Canadian parts content label list it as a U.S.-made or foreign-made vehicle?

1 U.S. made
2 Foreign-made
8 Don't know
9 Refused

5/78

24. In fact, the labor hours of workers in U.S. plants owned by foreign companies does not count as U.S. content. Knowing that, would that have made a difference to you when considering the type of vehicle to purchase?

1 Yes
2 No
8 Don't know
9 Refused

5/79
25. When you went to the dealership did you read the U.S./Canadian parts content label, or not?

1 Yes
2 No
3 Did not go to a dealership
8 Don't know
9 Refused

[IF Q.25 = 2, 3, D OR R, SKIP TO Q.33.]

5/80
26. How easy was the label to understand? Was it very easy to understand, somewhat easy, not too easy, or not easy at all?

4 Very easy
3 Somewhat easy
2 Not too easy
1 Not easy at all
8 Do not recall/Don't Know
9 Refused

[USE VERBIAGE IN PARENTHESES IF Q. 08 WAS ASKED; INSERT RESPONSE FROM Q.8]
6/08
27. (When answering the following questions, please think only about the purchase/lease of your [insert response from Q.08].)

Did the salesperson point out the U.S./Canadian parts content label to you or did you come across it on your own?

1 Salesperson pointed it out
2 Came across it on own
8 Don't know
9 Refused

[IF Q.27 = 2, D OR R, SKIP TO Q.29.]

6/09

28. Did the salesperson explain to you what the U.S./Canadian parts content label means?

1 Yes
2 No
8 Don't know
9 Refused

[IF Q.S2 = 1, USE VERBIAGE IN PARENTHESES]

6/10

29. How much influence did (has) the information on the label have (had) [illegible] considerations? On a scale of 1 to 7, where "1" means [illegible] a "7" means a great deal of influence, please rate how much influence the label had (has had) on your purchase or lease consideration?

1 No influence at all
2
3
4
5
6
7 A great deal of influence
8 Don't know
9 Refused

[ASK Q. 30 IF Q.29 = 5, 6, OR 7. OTHERWISE SKIP TO Q.31.]

9/16-17 thru 9/22-23

30. In what ways did the information on the label influence your purchase considerations?

(INTERVIEWER: TYPE IN RESPONSE. PROBE AND CLARIFY.)

[Ask Q.31 if Q. 27 = 1. OTHERWISE SKIP TO Q.32]

6/14

31. Did the salesperson make it an important part of his/her sales presentation to you, or not?

    1 Yes
    2 No
    8 Don't know
    9 Refused

[ASK Q. 32 IF Q.19= 2, D, OR R. OTHERWISE, SKIP TO Q.33.]

6/15

32. Now that you are aware of the label, would the label influence your future purchase of a vehicle?

    1 Yes
    2 No
    8 Don't know
    9 Refused

6/16

33. How often do you make it a point to "buy American" whether its cars **or any other items**? Would you say always, sometimes, rarely or never?

    1 Always
    2 Sometimes
    3 Rarely
    4 Never
    8 Don't know
    9 Refused

The following questions are for classification purposes only:

6/17

D1. Do you consider yourself to be the head of household? (INTERVIEWER: IF RESPONDENT SAYS HE/SHE IS "CO-HEAD" OF HOUSEHOLD, ENTER A "1")

    1 Yes
    2 No
    8 Don't know
    9 Refused

[IF Q.D1 = 1, SKIP TO Q.D6.]

6/18-19

[ONLY ACCEPT 18 TO 97]

D2. What is the age of the person whom you consider to be the head of your household? (IF NEEDED: Just your best estimate is fine.)

__ __ (ENTER NUMBER 18 TO 97; ENTER 97 IF R IS 97 YEARS OLD OR OLDER)

99 Refused

6/20

D3. What gender is that person?

1 Male
2 Female
9 Refused

6/21

D4. What is the last grade of school that the head of household completed? (IF NEEDED: Just your best estimate is fine.)

1 8th Grade or Less
2 Some High School
3 Graduated High School
4 Trade or Technical School
5 Some College
6 Graduated College
7 Post-graduate
8 Don't Know
9 Refused

6/22-23

D5. Is that person of Hispanic origin or background?
(IF "YES," ASK:) Is that person White Hispanic or Black Hispanic?
(IF "NO," ASK:) Is that person white, black or African-American, or some other race?

01 White/Caucasian
02 Black/African American
03 White Hispanic
04 Black Hispanic
05 Hispanic (no race given)
06 Other (SPECIFY)
99 Refused

6/24-25

[DO NOT ALLOW 00 FOR NUMBER OF ADULTS]

D6. Counting yourself, how many adults live in your household? (PROBE: DID THAT INCLUDE YOURSELF?)

__ __ ADULTS (CANNOT BE LESS THAN ONE)

99 Refused

6/26-28

D7. Of those adults, how many are male?

__ __ MALES

99 Refused

6/29-31

D7. Of those adults, how many are female?

__ __ FEMALES

99 Refused

[AFTER RESPONSE, CALCULATE: NUMBER OF MALES PLUS NUMBER OF FEMALES IN Q.D7 MUST EQUAL TOTAL NUMBER OF ADULTS IN Q.D6]

[IF SHORT COMPLETE (S2=2, 3, D or R) **AND** Q.D1 = 2, 3, D OR R, SKIP TO Q.D14.]

6/32

D8. What was the last grade of school you completed?

1 8th Grade or Less
2 Some High School
3 Graduated High School
4 Trade or Technical School
5 Some College
6 Graduated College
7 Post-graduate
8 Don't Know
9 Refused

[VALID RANGE IS 1900 - 1980; AFTER RESPONSE, CALCULATE AGE AND INSERT IN Q.D10]

6/35-36

Calculated Age

0 to 97

98 Don't know

99 Refused

6/37-40

D9. In what year were you born?

_ _ _ _

9998 Don't Know

9999 Refused

6/41

D10a. Just to confirm, you are [INSERT AGE] years old?

1 Yes

2 No

9 Refused

[IF Q. D10a = 2, CONTINUE. OTHERWISE, SKIP TO INSTRUCTION ABOVE D.11a.]

6/42

D10b. Then you must be [INSERT AGE] years old?

1 Yes

2 No

9 Refused

[IF SHORT COMPLETE (Q.S2 =2, 3, D, OR R), SKIP TO Q.D13**

9/26-28

D11a. What is your occupation or job title?

(INTERVIEWER: TYPE IN RESPONSE. PROBE AND CLARIFY.)

98 Don't know

99 Refused

NOT CODED

D11b. What are your duties?

(INTERVIEWER: TYPE IN RESPONSE. PROBE AND CLARIFY.)

8 Don't know
9 Refused

9/29-31

D11c. In what business or industry is this?

(INTERVIEWER: TYPE IN RESPONSE. PROBE AND CLARIFY.)

98 Don't know
99 Refused

6/52

D12. Would you describe the area in which you live as a: (READ LIST)

1 Large city
2 Suburb of a large city
3 Small town
4 Or rural area

---DO NOT READ BELOW---
8 Don't Know
9 Refused

6/53-54

D13. Are you of Hispanic origin or background?
(IF "YES," ASK:) Are you White Hispanic or Black Hispanic? (IF "NO," ASK:) Are you white, black or African-American, or some other race?

01 White/Caucasian
02 Black/African American
03 White Hispanic
04 Black Hispanic
05 Hispanic (no race given)
06 Other, SPECIFY
99 Refused

6/55

D14. If you added together the yearly incomes, before taxes, of all the members of your household for last year, 1997, would the total be: (READ LIST)

1 Less than $30,000, or
2 More than $30,000

---DO NOT READ BELOW---
8 Don't Know
9 Refused

[IF Q.D14 = 2, SKIP TO Q. D16. IF Q.D14 = D OR R, SKIP TO Q.D17.]

6/56

D15. Would that be: (READ LIST)

1 Under $20,000
2 Over $20,000 but less than $30,000

(---DO NOT READ BELOW---
8 Don't Know
9 Refused

[IF Q.D15 WAS ASKED, SKIP TO Q.D17]

6/57

D16. Would that be: (READ LIST)

$30,000 but less than $50,000	1
$50,000 but less than $75,000	2
$75,000 but less than $100,000	3
Or more than $100,000	4

---DO NOT READ BELOW---
8 Don't Know
9 Refused

6/58

D17. (INTERVIEWER: RECORD GENDER. IF NECESSARY SAY: I am recording that you are INSERT GENDER.)

1 Male
2 Female

Those are all the questions I have. Thank you very much for your time and cooperation. Have a good evening.

APPENDIX E

MANUFACTURER SURVEY QUESTIONNAIRE

Questions no. 17 in Part A and no. 20 in Part B of the manufacturer survey were not used in the analyses of this report.

National Highway Traffic Safety Administration

New Vehicle Labeling Study
Manufacturer Survey

Thank you very much for taking the time to fill out this survey. Your input is important to us. Please read each question carefully and check the response that most closely represents your views or record your response in the space provided. You will also find specific instructions in bold print; please read them carefully.

OMB NO: 2127-0593
EXPIRATION DATE: 8/31/2001

Part A. Sales/Customer Relations

1. What is your job title?

____

2. What make(s) of vehicle(s) do you manufacture?

____
____
____

3. On a scale of 1 to 7 where 1 means "not at all a factor" and 7 means "a very important factor", in your opinion, how much is US/Canadian parts content a factor in selling vehicles in the United States?

Not at all a factor						Very important factor	Don't Know
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y

4. What percentage of customers do you think is aware of the existence of parts content information labels?

_______________________ %

5. Did you give dealers any guidelines or materials for training sales staff to explain the information on the parts content label?

☐ 1 Yes
☐ 2 No → **Skip to Question 6**
☐ Y Don't know

5a. What did you provide them with? Please enclose if available.

____
____
____

6. Do you encourage or require dealers to make customers aware of parts content information labels?

☐ 1 Yes → **Skip to Question 7**
☐ 2 No
☐ Y Don't know

6a. Have you ever done this?

- ☐ 1 Yes
- ☐ 2 No → **Skip to Question 7**
- ☐ Y Don't know

6b. In what month and year did you discontinue this practice?

__ __ / __ __
Month Year

Why?

____
____
____

7. Do you provide dealers with any guidance or recommendations for using the parts content information label as a selling point?

- ☐ 1 Yes → **Skip to Question 8**
- ☐ 2 No
- ☐ Y Don't know

7a. Have you ever done this?

- ☐ 1 Yes
- ☐ 2 No → **Skip to Question 8**
- ☐ Y Don't know

7b. In what month and year did you discontinue this practice?

__ __ / __ __
Month Year

Why?

____
____
____

8. Do you provide customers with information about US/Canadian parts content in addition to the label?

- ☐ 1 Yes → **Skip to Question 9**
- ☐ 2 No
- ☐ Y Don't know

8a. Have you ever done this?

- ☐ 1 Yes
- ☐ 2 No → **Skip to Question 10**
- ☐ Y Don't know

8b. In what month and year did you discontinue this practice?

__ __ / __ __
Month Year

Why?

____

____

____

9. How do/did you provide information to customers about US/Canadian parts content? **(Please check all that apply.)**

- ☐ 1 Through a brochure/guide
- ☐ 2 Provide an 800 number on the label inviting questions
- ☐ 3 Through advertising
- ☐ 0 Other, **Please specify:** ____________________
- ☐ Y Don't know

10. Is "Built in America" or some other reference to America used in your advertising strategies?

- ☐ 1 Yes → **Skip to Question 11**
- ☐ 2 No
- ☐ Y Don't know

10a. Have you ever done this?

- ☐ 1 Yes
- ☐ 2 No → **Skip to Question 12**
- ☐ Y Don't know

10b. In what month and year did you discontinue this practice?

__ __ / __ __
Month Year

Why?

____

____

____

11. In which of the following do/did you show parts content information ?
(Please check all that apply.)

- ☐ 1 In-store displays
- ☐ 2 Brochures
- ☐ 3 Newspaper ads
- ☐ 4 Magazine ads
- ☐ 5 Television ads
- ☐ 6 Radio ads
- ☐ 0 Other, **Please specify:** ______________________________
- ☐ 9 None
- ☐ Y Don't know

12. Do you have any data or experience that suggests US/Canadian parts content is important to consumers?

- ☐ 1 Yes
- ☐ 2 No
- ☐ Y Don't know

13. Have you developed a consumer guide to US/Canadian parts content for dealers to give to customers?

- ☐ 1 Yes
- ☐ 2 No
- ☐ Y Don't know

14. Do you think parts content information labels are understandable to the customer?

- ☐ 1 Yes
- ☐ 2 No
- ☐ Y Don't know

15. What feedback, if any, have customers, dealers or suppliers given to your company about the labels?

____
____
____

16. What suggestions do you have for making the parts content information label clearer, more understandable, or more useful to consumers?

____
____
____

17. In the future, do you think the labeling regulation should be maintained, changed or eliminated?

- ☐ 1 Maintained
- ☐ 2 Changed
- ☐ 3 Eliminated
- ☐ Y Don't know

Please explain:

Part B. Finance/Accounting

1. What is your job title?

____

2. What significant shifts in content or assembly, if any, did you undertake in the five years prior to 1995?

____
____
____
____
____
____

2a. Were any of these motivated by American Automobile Labeling Act?

☐ 1 Yes
☐ 2 No
☐ Y Don't know

3. Have you recently shifted any of your product lines, or component parts from production outside your country to production in your country?

☐ 1 Yes
☐ 2 No→ **Skip to Question 4**
☐ Y Don't know

3a. What factors contributed to this shift? You may add a narrative explanation below.
(Please check all that apply.)

☐ 1 Cost of labor
☐ 2 Quality of labor
☐ 3 Availability of human resources
☐ 4 Cost of materials
☐ 5 Quality of materials
☐ 6 Availability of materials
☐ 7 Availability of physical plant/equipment
☐ 8 Operating costs
☐ 9 Distribution costs
☐ 0 Wanted to create jobs for Americans
☐ 1 Wanted vehicles to have higher US/Canadian parts content
☐ 2 Customer demand
☐ 3 Parts content information labels
☐ 4 Currency exchange rate
☐ 5 Import duties
☐ 6 Taxes
☐ 7 Availability of credit to invest in physical plant
☐ 8 Government policies of home country
☐ 9 Federal, State or local incentives to invest in the United States
☐ 0 Other reasons. **Please specify:** ______________________

____

____

____

Answer 3b if you checked more than one response in question 3a.

3b. What were the three most important factors contributing to the decision to shift from production outside of your country to production in your country?

1) ____
2) ____
3) ____

4. Have you recently shifted any of your product lines, or component parts from production in your country to production outside of your country?

☐ 1 Yes
☐ 2 No → **Skip to Question 5**
☐ Y Don't know

4a. What factors contributed to this shift? You may add a narrative explanation below.
(Please check all that apply.)

☐ 1 Cost of labor
☐ 2 Quality of labor
☐ 3 Availability of human resources
☐ 4 Cost of materials
☐ 5 Quality of materials
☐ 6 Availability of materials
☐ 7 Availability of physical plant/equipment
☐ 8 Operating costs
☐ 9 Distribution costs
☐ 0 Customer demand
☐ 1 Parts content information labels
☐ 2 Currency exchange rate
☐ 3 Import duties
☐ 4 Taxes
☐ 5 Availability of credit to invest in physical plant
☐ 6 Government policies of home country
☐ 0 Other reasons. **Please specify:** ______________________

____

____

____

Answer 4b if you checked more than one response in question 4a.

4b. What were the three most important factors contributing to the decision to shift from production in your country to production outside of your country?

1) ______________________
2) ______________________
3) ______________________

5. On a scale of 1 to 7 where 1 means not at all a factor and 7 means a very important factor, how much of a factor is the currency exchange rate relationship in your decision on where to produce auto parts and vehicles?

Not at all a factor						Very important factor	Don't Know
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y

6. Have any fleet vehicle purchasers expressed an interest in the parts content information labels?

- ☐ 1 Yes
- ☐ 2 No
- ☐ Y Don't know

7. Have any fleet vehicle purchasers indicated a preference for vehicles with high US/Canadian parts content?

- ☐ 1 Yes
- ☐ 2 No
- ☐ Y Don't know

8. What is your estimate of the overall cost to implement the American Automobile Labeling Act?

- ☐ 1 Less than $250,000
- ☐ 2 $250,000 to less than $500,000
- ☐ 3 $500,000 to less than $100,000
- ☐ 4 $1 million to less than $2 million
- ☐ 5 $2 million to less than $3 million
- ☐ 6 $3 million to less than $4 million
- ☐ 7 $4 million to less than $5 million
- ☐ 8 $5 million to less than $6 million
- ☐ 9 Over $6 million
- ☐ Y Don't Know

8a. Please explain costs, with confidential information if desired.

____

____

____

9. How many hours were spent on the startup to implement the AALA?

______________________ Hours

9a. How much did the AALA startup cost?

- ☐ 1 Less than $100,000
- ☐ 2 $100,000 to less than $200,000
- ☐ 3 $200,000 to less than $300,000
- ☐ 4 $300,000 to less than $400,000
- ☐ 5 $400,000 to less than $500,000
- ☐ 6 Over $500,000
- ☐ Y Don't Know

9b. Please explain costs, with confidential information if desired.

____

____

____

10. How many hours are spent annually for continued operating and maintenance costs?

____________________ Hours

10a. How much do you spend annually on ongoing data collection and maintaining the database for the content reporting requirements for the American Automobile Labeling Act?

- ☐ 1 Less than $20,000
- ☐ 2 $20,000 to less than $40,000
- ☐ 3 $40,000 to less than $60,000
- ☐ 4 $60,000 to less than $80,000
- ☐ 5 $80,000 to less than $100,000
- ☐ 6 Over $100,000
- ☐ Y Don't Know

10b. Please explain costs, with confidential information if desired.

____

____

____

____

11. Is the cost for data collection and maintaining the database for the content reporting requirements for the American Automobile Labeling Act higher, lower or about the same as the costs incurred for the North American Free Trade Agreement?

- ☐ 1 Higher
- ☐ 2 Lower
- ☐ 3 About the same
- ☐ Y Don't know

12. Is the cost for data collection and maintaining the database for the content reporting requirements for American Automobile Labeling Act higher, lower or about the same as the costs incurred for data collection for assigning passenger cars to domestic or import fleets for the Corporate Average Fuel Economy Agreement?

- ☐ 1 Higher
- ☐ 2 Lower
- ☐ 3 About the same
- ☐ Y Don't know

13. Thinking about the **Model Year 1994** vehicles you manufactured, what is your estimate of their US/Canadian parts content? Using American Automobile Labeling Act definitions, please estimate each carline's US/Canadian parts content.

Carline	US/Canadian Parts Content
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %
____________	____________ %

14. Do your suppliers use a single form for reporting information required for the NAFTA, CAFE, and the AALA, thus reducing suppliers' reporting costs?

- ☐ 1 Yes
- ☐ 2 No
- ☐ Y Don't know

15. Based on information received from suppliers, what kinds of costs are imposed on suppliers as a result of this American Automobile Labeling Act? **(Please check all that apply.)**

- ☐ 1 Annual employee hours
- ☐ 2 Payroll costs
- ☐ 3 Set-up and maintenance of computer database
- ☐ 4 Cost of paper certificates
- ☐ 0 Other. **Please specify:** ______________________________
- ☐ Y Don't know

16. What is your estimate of the overall cost of this program to suppliers?

______________________________ $

17. Do all of your purchase orders to suppliers include a requirement to furnish US/Canadian parts content information?

- ☐ 1 Yes
- ☐ 2 No
- ☐ Y Don't know

18. What percent of suppliers furnish US/Canadian parts content information?

______________________________ %

19. By what percentage will your costs change following the end of the two-year provision which allows flexibility in making estimates of content determinations where outside suppliers have not responded to requests for content information?

______________________________ %

20. In the future, do you think the labeling regulation should be maintained, changed or eliminated?

- ☐ 1 Maintained
- ☐ 2 Changed
- ☐ 3 Eliminated
- ☐ Y Don't know

Please explain:

____

____

____

Thank you for taking the time to fill out this survey.

Please return it in the enclosed, postage-paid envelope.

If you should misplace the return envelope, please mail your questionnaire to:

Chilton Research Services
410 Horsham Road, P.O. Box 189
Horsham, PA 19044-9399

APPENDIX F

DEALER SURVEY QUESTIONNAIRE

Questions no. 22 in the dealer survey was not used in the analyses of this report.

National Highway Traffic Safety Administration

New Vehicle Labeling Study
Dealer Survey

Thank you very much for taking the time to fill out this survey. Your input is important to us. Please read each question carefully and check the response that most closely represents your views or record your response in the space provided. You will also find specific instructions in bold print; please read them carefully.

OMB NO: 2127-0593
EXPIRATION DATE: 8/31/2001

The American Automobile Labeling Act (AALA) provides that all new passenger cars and light trucks manufactured on or after October 1, 1994, bear labels providing information regarding their US/Canadian and non-US/Canadian parts content. The AALA does **not** require dealers or sales staff to make customers aware of the parts content label, use parts content information as part of their sales presentation or provide customers with additional parts content information. However, we are interested in learning the extent to which dealers and sales staff use the content label information.

The next several questions will be about the parts content information label. Please read each question carefully and check the response that most closely represents your and your franchise's views. You will also find specific instructions next to several questions; please read them carefully.

1. How aware are you of the AALA and the US/Canadian parts content information label?

☐ 1 Very aware

☐ 2 Somewhat aware

☐ 3 Not very aware

☐ 4 Not aware at all ➔ **If you checked "not aware at all" skip to Q.14.**

2. Please rate each of the following statements on a scale of 1 to 7 where 1 means the statement "describes none of my customers" and 7 means the statement "describes all of my customers." **(You may also use any number in between.)**

	None of my customers						All of my customers	Don't Know
a. Customers are aware of the existence of parts content information labels.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
b. Customers read the parts content information label on the vehicle window.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
c. Customers ask questions about the information on the parts content labels.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
d. Customers understand the parts content label.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y

3. Please rate each of the following statements on a scale of 1 to 7 where 1 means "strongly disagree" and 7 means "strongly agree." **(You may also use any number in between.)**

	Strongly disagree						Strongly agree	Don't Know
a. Customers consider US/Canadian parts content an important factor for selecting a vehicle.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
b. Customers consider the information on the parts content label when making a purchase decision.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
c. Customers show a preference in "buying American."	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
d. Customers show a preference in buying foreign.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
e. Customers are more interested in the purchasing or leasing price of an automobile than the information on the parts content label.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y

4. Which aspect of the parts content label do you think customers are most interested in? **(Please check just one response.)**

☐ 1 United States/Canadian parts content

☐ 2 Major sources of non-US/Canadian parts content

☐ 3 Final assembly point

☐ 4 Country of origin of engine parts

☐ 5 Country of origin or transmission parts

☐ 0 Other, **please specify:** ______________________________

☐ 9 None

☐ Y Don't Know

5. Have customers expressed concern because the parts content information label combines US and Canadian as domestic content?

☐ 1 Yes

☐ 2 No

☐ Y Don't Know

6. Has a customer ever **declined** to purchase a vehicle as a result of the kind of information provided on the parts content label?

☐ 1 Yes

☐ 2 No

☐ Y Don't know

Answer 6a if you checked "Yes" in question 6.

6a. To the best of your knowledge, how many times has this happened?

7. Has a customer ever **decided** to purchase a vehicle as a result of the kind of information provided on the parts content label?

☐ 1 Yes

☐ 2 No

☐ Y Don't know

Answer 7a if you checked "Yes" in question 7.

7a. To the best of your knowledge, how many times has this happened?

8. Please rate each of the following statements on a scale of 1 to 7 where 1 means the statement "does not describe my sales staff at all" and 7 means the statement "describes my sales staff completely." **(You may also use any number in between.)**

	Does not describe at all						Describes completely	Don't Know
a. The sales staff is aware of the parts content information labels.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
b. The sales staff understands the information on parts content information labels.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
c. The sales staff can effectively explain the parts content information labels to customers.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
d. The sales staff keeps updated on parts content information.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y

9. Under what circumstances are sales staff told to explain parts content information labels to customers?

- ☐ 1 Sales staff give the information to customers only when they inquire about it.
- ☐ 2 Sales staff give the information to customers without being asked.
- ☐ 3 Sales staff are not given any guidelines.
- ☐ Y Don't Know

10. What type of training are sales staff given to explain the information on the parts content label? **(Please check all that apply.)**

- ☐ 1 Seminar
- ☐ 2 Workshop
- ☐ 3 Brochure
- ☐ 4 Sales Meetings
- ☐ 0 Other, please specify: ______________________
- ☐ 9 None
- ☐ Y Don't Know

11. Did manufacturers give you any guidelines or materials for training sales staff to explain the information on the parts content label?

- ☐ 1 Yes
- ☐ 2 No
- ☐ Y Don't know

12. Did manufacturers provide any guidance or recommendations for using the parts content information label as a selling point?

- ☐ 1 Yes
- ☐ 2 No
- ☐ Y Don't know

13. Please rate each of the following statements on a scale of 1 to 7 where 1 means "the sales staff does this none of the time" and 7 means "the sales staff does this all of the time." **(You may also use any number in between.)**

	None of the time						All of the time	Don't Know
a. The sales staff points out the parts content information label to customers.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
b. The sales staff makes the parts content information label an important part of its sales presentations.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y

14. Does your franchise show parts content information in: **(Please check all that apply.)**

☐ 1 In-store displays

☐ 2 Brochures

☐ 3 Newspaper ads

☐ 4 Magazine ads

☐ 5 Television ads

☐ 6 Radio ads

☐ 0 Other. **Please specify:** ______________________

☐ 9 None

☐ Y Don't Know

15. On a scale of 1 to 7 scale, where 1 means "none of the time" and 7 means "all of the time," please rate how often sales staff give customers the following information, apart from the label.
(You may also use any number in between.)

	None of the time						All of the time	Don't Know
a. The final assembly point of the vehicle.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
b. The country of origin of the engine parts.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
c. The country of origin of the transmission parts.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
d. The percentage of US/Canadian parts that comprise the vehicle.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
e. The major sources of non-US/Canadian parts content.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y

16. Please rate the following statements on a scale of 1 to 7 where 1 means "strongly disagree" and 7 means "strongly agree." **(You may also use any number in between.)**

	Strongly disagree						Strongly agree	Don't Know
a. Parts content information labels are used as a sales tool.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
b. Parts content information labels are not involved in the sales process.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
c. The percentage of US/Canadian parts content is used as a sales tool.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
d. The sales staff is likely to use the parts content information label in its sales presentation if the vehicle was assembled in the United States.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
e. The sales staff is likely to use the parts content information label in its sales presentation if a high percentage of vehicle parts were manufactured outside of the United States.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
f. Parts content information can be harmful to making a sale.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y
g. The sales staff is likely to point out the parts content information label if the United States is the country of origin of the transmission.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ Y

CLASSIFICATION QUESTIONS

17. What is your job title?

☐ 1 Sales Manager

☐ 2 General Manager

☐ 3 Dealer/Principal

☐ 0 Other. **Please specify:** ______________________

18. In Column A, please record the franchises you represent. In Column B, please record the annual new vehicle sales revenue for each franchise.

Column A	Column B
Franchise:______________________	$ ___ , ___ , ___ .00
Franchise:______________________	$ ___ , ___ , ___ .00
Franchise:______________________	$ ___ , ___ , ___ .00
Franchise:______________________	$ ___ , ___ , ___ .00
Franchise:______________________	$ ___ , ___ , ___ .00
Franchise:______________________	$ ___ , ___ , ___ .00
Franchise:______________________	$ ___ , ___ , ___ .00
Franchise:______________________	$ ___ , ___ , ___ .00

19. What is the total gross annual new vehicle sales volume of your franchise?

☐ 1 Less than $25 million

☐ 2 $25 million to $49 million

☐ 3 $50 million to $100 million

☐ 4 Over $100 million

☐ Y Don't Know

20. How many people are on your new vehicle sales staff?

____

21. What suggestions do you have for making the parts content information label clearer, more understandable, or more useful to consumers?

22. In the future, do you think the labeling regulation should be maintained, changed or eliminated?

- ☐ 1 Maintained
- ☐ 2 Changed
- ☐ 3 Eliminated
- ☐ Y Don't Know

Please explain.

Thank you very much for taking the time to fill out this survey. Please return it in the enclosed, postage-paid envelope by September 21, 1998.