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| **FIGURE 1:** *The HM Group: Global automobile output, PSSI*  **Note**: 1. The annual domestic and overseas annual production volume of automobiles is equal to the sum of HMC’s and KMC’s, respective production volumes (including passenger and commercial vehicles).2. PSSI score is based on these data.  **Source:** Korea Automobile Manufacturers Association, *Korean Automobile Industry*, Hyundai Motor Company, *Sustainability Report, Annual Report*, Kia Motors Corporation, *Sustainability Report, Annual Report*. |

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| **FIGURE 2:** *Domestic market share for brand new passenger vehicles, tariff rate*  **Note:** 1. Sales of recreational vehicles are included in this figure. 2. Sales volume of Hyundai Precision Industry Co. Ltd., which belonged to Hyundai Group through HMC, is included in the HMC data from 1987 through 2000. Sales volume of Asia Motors Co. Ltd., which was merged with KMC, is included in the KMC data from 1987 through 2000. 3. From 2001 onward (when the HM Group was founded), total sales volume is equal to the sum of HMC and KMC’s respective sales volumes. 4. The tariff rate on BFA in January of 1988 was 40%; the tariff rate on BFA in March of 1988 was 30%. Therefore, we calculated the tariff rate in 1988 to be 35%. 5. HMC’s and KMC’s respective market shares were calculated by the author.  **Source**: Korea Automobile Importers and Distributors Association (2015)*,* Korea Customs Service, Korea Automobile Manufacturers Association (2005), Hyundai Motor Company, *Sustainability Report,* *Annual Report*, Kia Motors Corporation, *Sustainability Report,* *Annual Report*. |

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| **FIGURE 3:** *Total annual sales volume of passenger vehicles in Korea’s domestic market, Korea’s GNI per capita*  **Note:** The annual sales volume of BFA is not included in the total annual sales volume of passenger vehicles.  **Source:** The World Bank, *International Comparison Program database*, Korea Automobile Importers and Distributors Association (2015), Korea Automobile Manufacturers Association (2003; 2005), Korea Automobile Manufacturers Association, *Korean Automobile Industry*. |

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| **FIGURE 4:** *HM Group’s automobile supply route to the overseas market*  **Note:** 1. Export volume of Asia Motors Co. Ltd., which was merged into KMC, is included in the KMC data from 1980 to 1999. 2. Both overseas output and export volume consist of the sum of passenger and commercial vehicles; the number of knockdown vehicles is excluded from export volume.  **Source:** Korea Automobile Manufacturers Association (2005), Korea Automobile Manufacturers Association, *Korean Automobile Industry*, Korea Automotive Research Institute, *Korean Automotive Industry*, Hyundai Motor Company, *Sustainability Report,* *Annual Report*, Kia Motors Corporation, *Sustainability Report,* *Annual Report*. |

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| |  |  | | --- | --- | |  |  | |  |  |   **FIGURE 5:** *Total annual sales volume of brand new passenger vehicles in EEs, production rates in HM Group’s production facilities by regional groups*  **Source:** FOURIN, Inc. (2013), OICA (2014a; 2014b) Hyundai Motor Company, *Sustainability Report,* *Annual Report*, Kia Motors Corporation, *Sustainability Report,* *Annual Report*. |

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| |  | | --- | | Global business sites of HMC  Global business sites of KMC  Global business sites of MOBIS (Module)  Global business sites of WIA (Module)  Global business sites of MOBIS (Auto parts)  Global business sites of WIA (Auto parts)  Hyundai Dymos China (Module, Auto parts)  Asia  Europe  America  Korea  China  India  USA  Brasil  Turkey  Czech, Rep.  Slovakia  Russia  HMC  MOBIS  KMC  WIA  HMI  MIN  HMB  MBR  HAOS  MTR  HMMC  MCZ  KMS  MSK  HMMR  MMCIS  HMMA  MAL  KMMG  MAL-GA  BHMC  BMA  DYK  JMA  CHMC  HDC  **Abbreviation**  **-Asia**  BMA Beijing MOBIS Automotive Parts Co., Ltd.  BHMC Beijing Hyundai Motor Company  CHMC Sichuan-Hyundai Motor Company  DYK Dongfeng Yueda Kia Motor Co., Ltd  HDC Hyundai Dymos China  HMC Hyundai Motor Company  HMI Hyundai Motor India, Ltd.  JMA Jiangsu MOBIS Automotive Parts Co., Ltd.  KMC Kia Motors Corporation  MIN MOBIS India, Ltd.  MOBIS Hyundai MOBIS  WIA Hyundai Wia Corporation  **-America**  MBR Mobis Brasil Fabricacao De Auto Pecas Ltda  HMB Hyundai Motor Brasil  HMMA Hyundai Motor Manufacturing Alabama  KMMG Kia Motors Manufacturing Georgia, Inc.  MAL MOBIS Alabama, LLC  MAL-GA MOBIS Georgia  **-Europe**  HAOS Hyundai Assan Otomotive Sannayi Ve Ticaret A.S  HMMC Hyundai Motor Manufacturing Czech s.r.o.  HMMR Hyundai Motor Manufacturing Russia  KMS Kia Motors Slovakia s.r.o.  MCZ MOBIS Automotive Czech s.r.o.  MMCIS MOBIS Module CIS, LLC  MSK MOBIS Slovakia s.r.o.  MTR MOBIS Turkey |   **FIGURE 8:** *An exclusive supply relationship between an automaker and a module maker in the HM Group*  **Source:** Constructed by the author. |

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| |  |  | | --- | --- | |  |  |   **FIGURE 9:** *HMC’s and KMC’s amount of raw materials purchased per vehicle*  **Notes:** 1. RAWPV*t* = (∑ HMC’s RAW*t* + ∑ KMC’s RAW*t*) / (∑ HMC’s DP*t* + ∑ KMC’s DP*t*) (*t* = 2004, …, 2013) where, RAWPV*t*: amount of raw materials purchased per vehicle in the year *t*, RAW*t*: amount of raw materials purchased in the year *t*, DP*t*: domestic production in the year *t*. 2. “4Steel makers” is comprised of Hyundai Steel, Hyundai Hysco, Hyundai BNG Steel, and Samwoo. 3. Total raw materials purchased includes materials purchased from both affiliates and non-affiliates.  **Source:** Computed by the author by using the data from each company, *Auditor's Report, Annual Report*. |

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| |  | | --- | | Design, Assembly, Production (101 minutes)  Production order  (Computer input)  **Automobile**  **plant**  **(HMC)**  Transport,  Installation  (34  minutes)  **Module**  **plant**  **(MOBIS)**  Receive production order  Loading  process  12 Km  Assembly (46 minutes)  (10 minutes)  Receipt of  Sequence Information  Wiring  Crash Pad  Cluster  Cockpit Module  Uncompleted Vehicle  Completed Vehicle |   **FIGURE 10:** *The JIS production system in MOBIS: the case of the cockpit module*  **Source:** Reconstructed by the author by using the figure from Jung (2008). |