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# Linking labour, trade and macro. Is a task-based approach useful?

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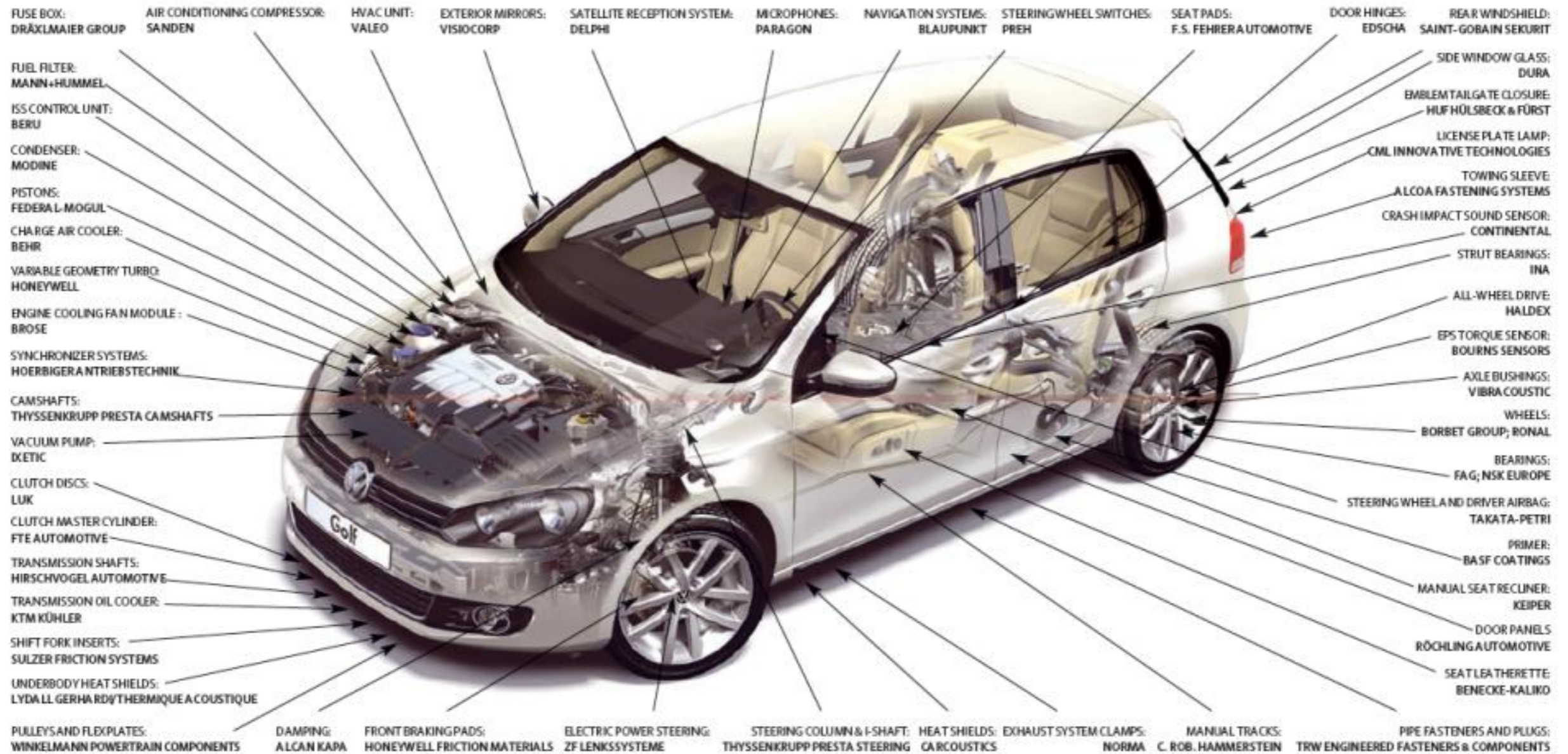


# Macro picture and labour market analyses

- Micro-studies highlight **wage** developments. Provide very useful institutional background for labour market developments.
- Macro emphasizes the increasing role of **intangibles**, but faces difficulties in its measurement and contribution to productivity.
- Touched upon but not analysed (long-term trends):
  - What is the role of **biased technological change**?
  - **Trade-linkages** between firms and countries (e.g. outsourcing and off-shoring).



# The traditional view on production

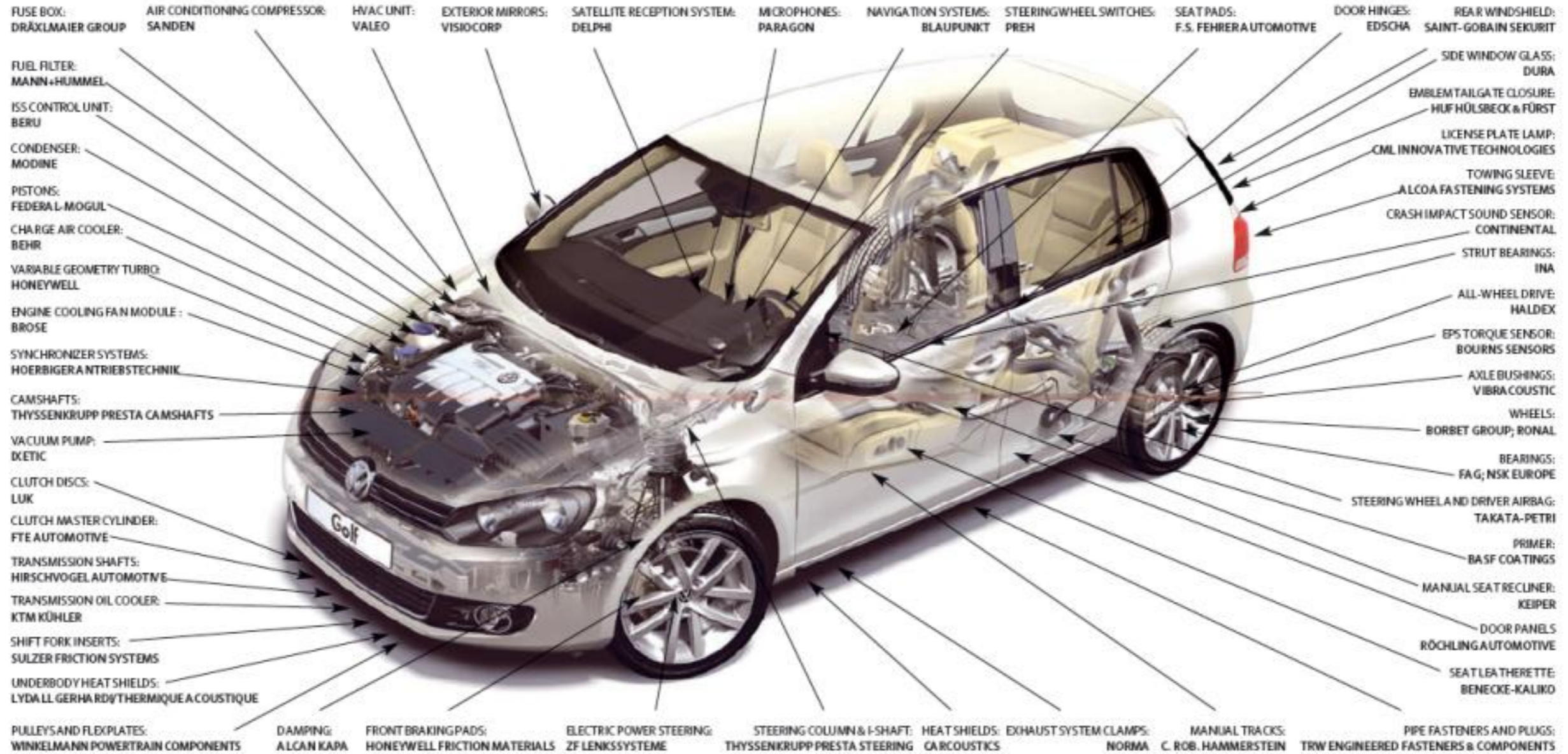


German car is a function of German labour and capital





# The task-based view on production



A "German" car is an end-result of a series of tasks  
 (e.g. R&D, marketing, assembly, logistics)  
 Which are carried out by combinations of labour and capital,  
 domestic and foreign



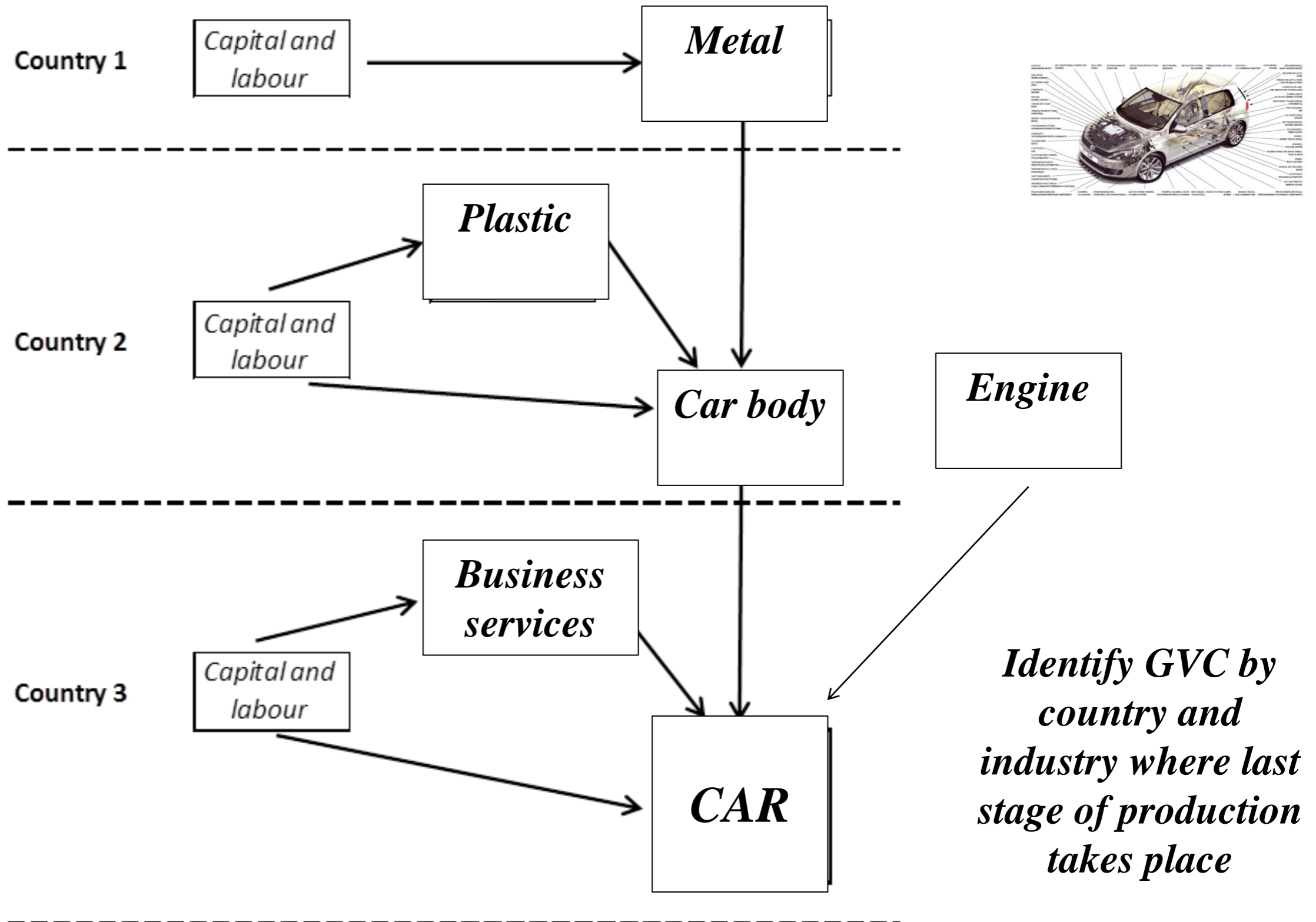
# A Task-based approach to production

- Analysis of **vertically integrated production function** (Pasinetti 1973, Autor and Acemoglu 2011): final output is combination of labour and capital anywhere.
- **New view allows sharper focus** on:
  - Automation/robotics (e.g. routine tasks substitution, FBTC)
  - Contribution of intangibles (e.g. R&D and marketing tasks)
  - Wages and returns to capital
  - International fragmentation of production (e.g. off-shoring)
  - and interdependence of tasks across industries and countries (e.g. outsourcing of business services tasks)
- But can we bring it to the data?



# Stylized global production system for car

*Countries-  
industries  
delivering  
value  
added*



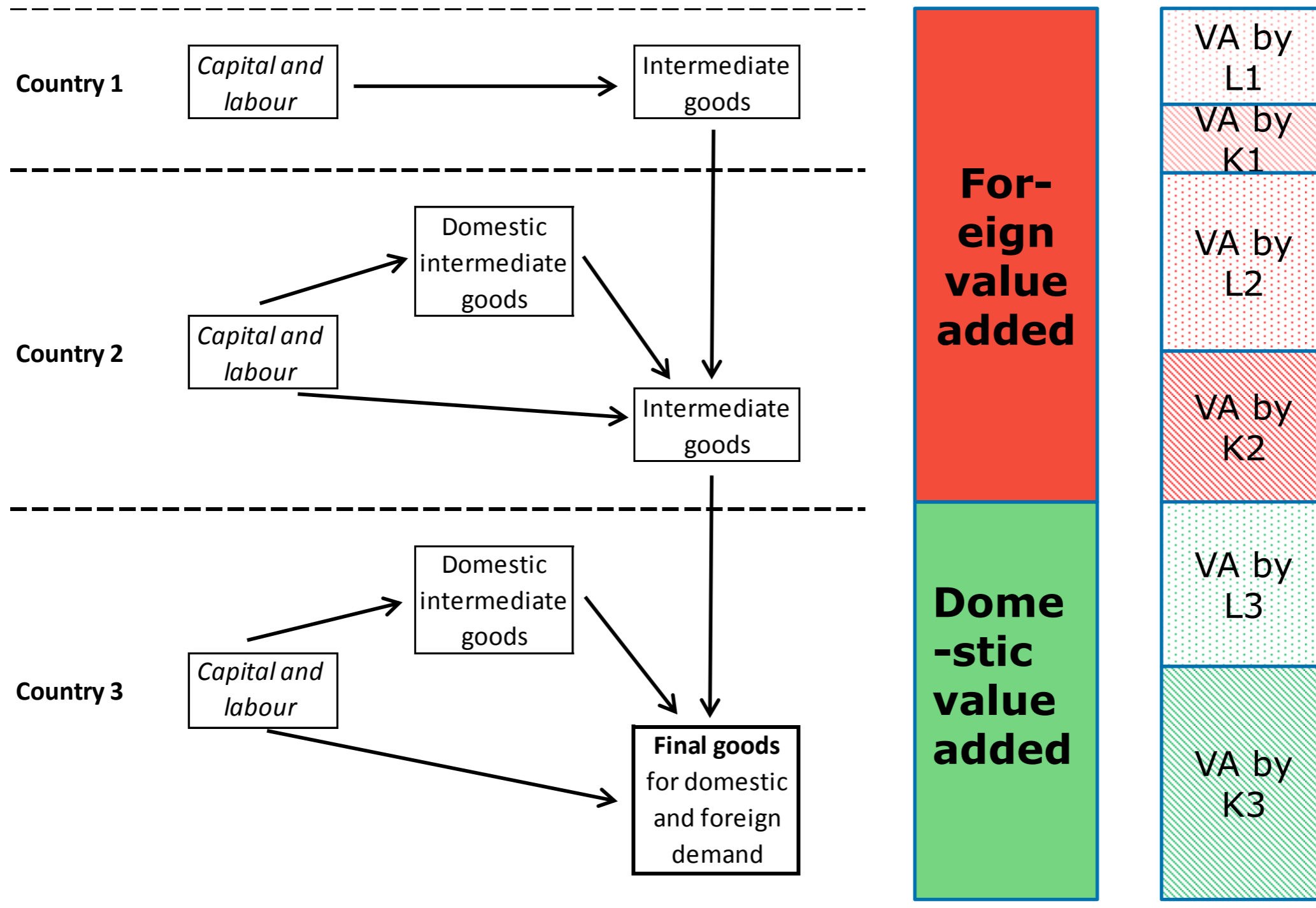




# Factor content of a global value chain

## Production process of a good

## Value of good





# Some findings of GVC analysis on final manufacturing products

- Increasing fragmentation of production across borders, in particular outside regional trade blocks (Los et al. 2014).
- Growth in gross exports is much faster than growth in value added exports and
- there is increasing share of services sector contributing to manufacturing goods (Timmer et al. 2013)
- Increasing share of value added by capital (intangibles? SBTC?) and high-skilled labour in GVCs (Timmer et al. 2014)





- To further understanding of macro-productivity and link to labour market one needs more data and analysis of tasks/activities: What do workers and firms do?
- Measurement progress is being made:
  - World input-output databases (e.g. [www.wiod.org](http://www.wiod.org))
  - Data on occupations and tasks
  - Data on business activities of firms



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