

Factsheets to An Input-Output Focused Approach to Characterize Freight Transport Models

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Abstract

The selection of an appropriate freight transport model for a specific research subject is based on a set of multidimensional criteria, as e.g. use-cases, geographical scope, methodological design, and input and output data of the model.

We made an attempt to characterise different freight transport models, with a focus on the relevant input and output data. For this attempt, we used the SADT modelling concept (because of its clear input-output focus and its simplicity in terms of symbols and syntax), and introduced a set of binary general differentiators of freight transport models.

We applied our characterization method to twelve selected freight transport models. The results of our approach may help other researchers to methodologically assess, which model(s) they might use, and which data these models require.

Content

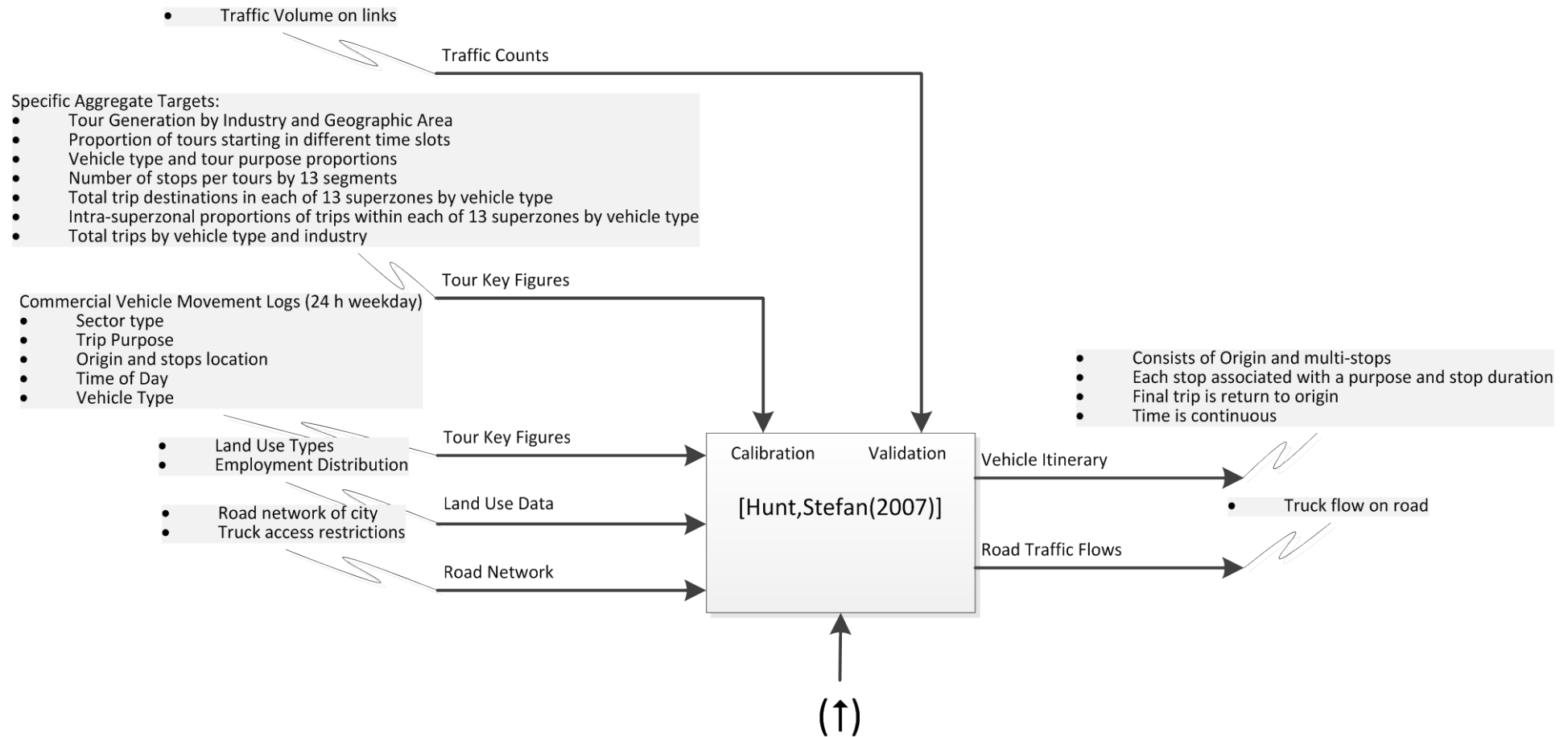
Abstract	1
1 Model Name : Hunt,Stefan(2007)	2
2 Model Name : Mueller, Schneider(2009)	3
3 Model Name : Tavasszy(1998).....	4
4 Model Name : Hunt,Gregor(2008).....	5
5 Model Name : Dejong(2010)	6
6 Model Name : Liedtke(2009)	7
7 Model Name : Wisetjindawat,Sano(2003)	8
8 Model Name : Southworth(1982).....	9
9 Model Name : Holmgren_et_al(2012).....	10
10 Model Name : Boerkamps_van_Binsbergen_(1999).....	11
11 Model Name : Gentile,Vigo(2007)	12
12 Model Name : Ogden(1978)	13
References	14

Model Name : Hunt,Stefan(2007)

Citation : Hunt, J; Stefan, K (2007): Tour-based microsimulation of urban commercial movements. In Transportation Research Part B: Methodological 41 (9), pp. 981–1013.

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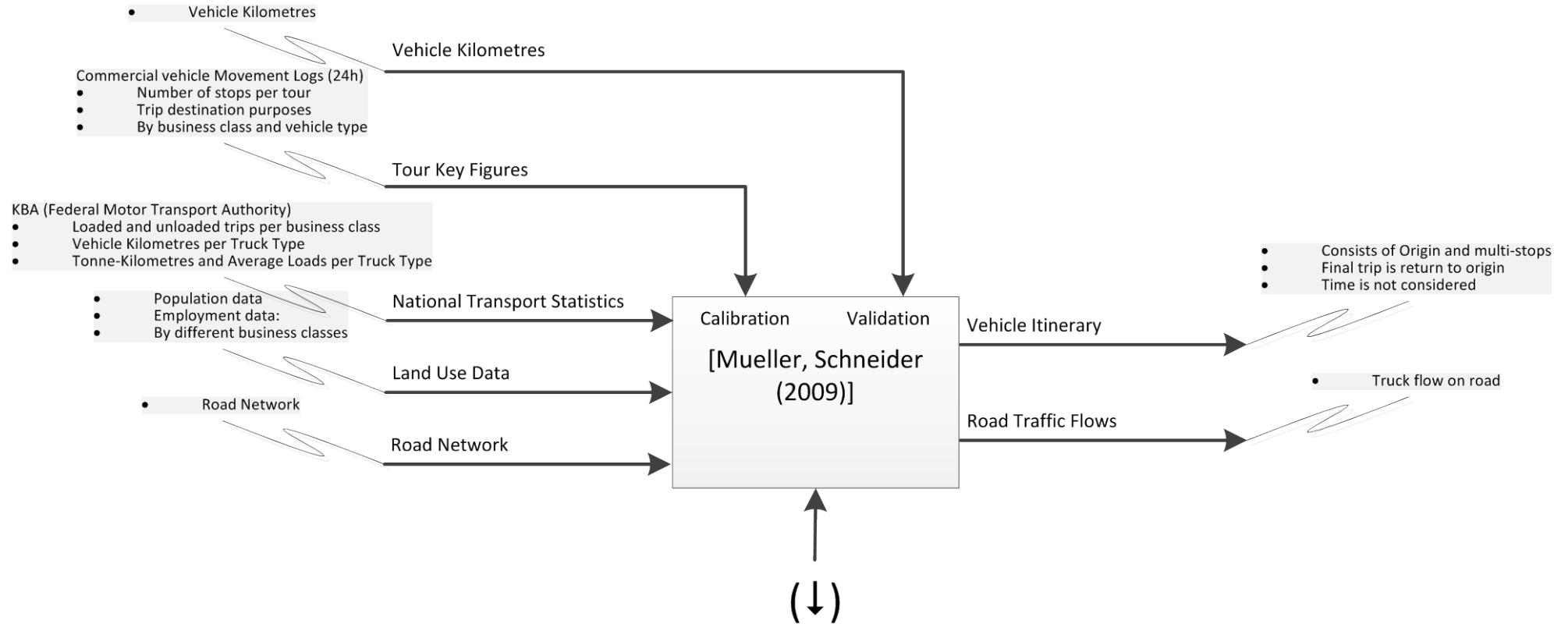


Model Name : Mueller, Schneider(2009)

Citation : Müller, Stephan; Schneider, Sebastian (2009): A methodology for deploying VISEVA-W/VISUM for large area goods transport modelling. A working paper. DLR. Berlin.

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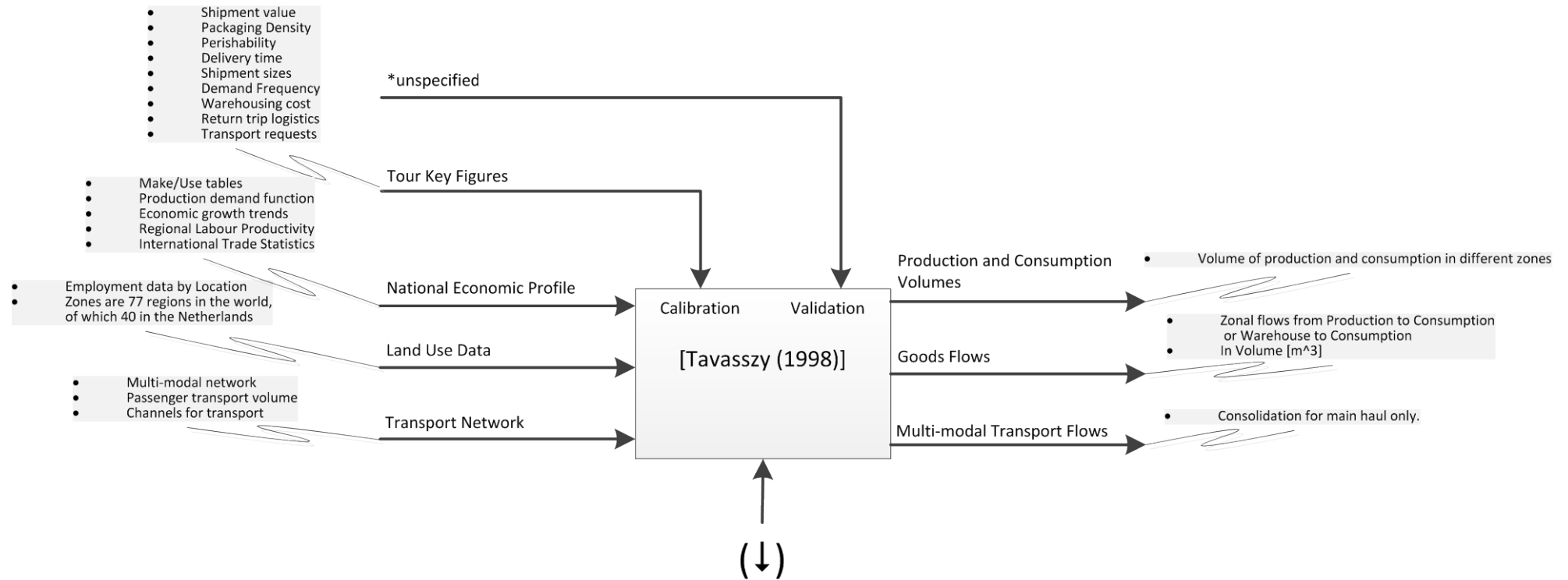


Model Name : Tavasszy(1998)

Citation : Tavasszy, Lorant A; Smeenk, Ben; Ruijgrok, Cees J (1998): A DSS For Modelling Logistic Chains in Freight Transport Policy Analysis. In International Transactions in Operational Research 5 (6), pp. 447–459.

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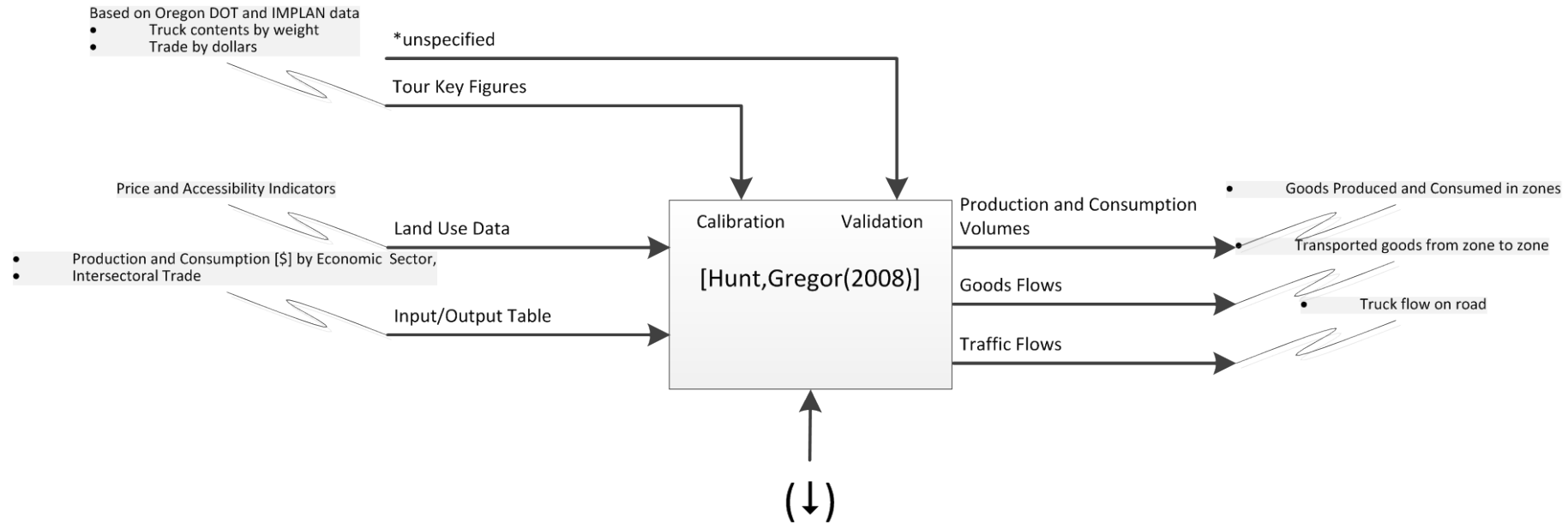


Model Name : Hunt,Gregor(2008)

Citation : Hunt, JD; Gregor, BJ (2008): Oregon Generation 1 Land Use–Transport Economic Model Treatment of Commercial Movements. Case Example. In Kathleen L. Hancock (Ed.): Freight demand modeling. Tools for public-sector decision making : summary of a conference, September 25-27, 2006, Keck Center of the National Academies,

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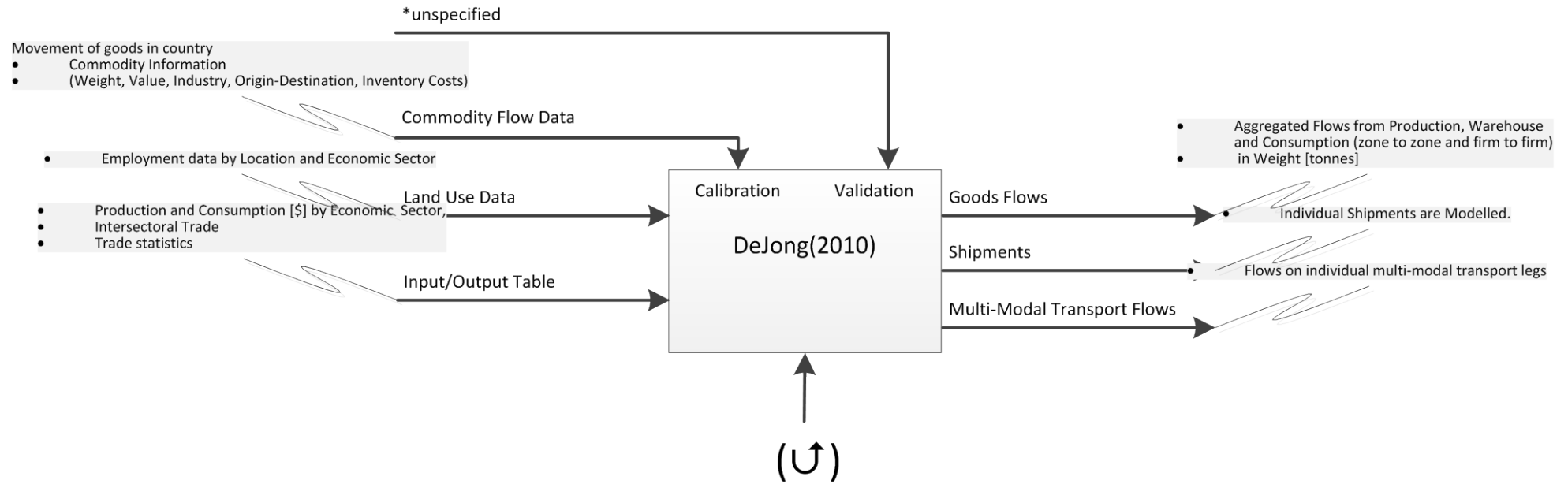


Model Name : Dejong(2010)

Citation : de Jong, Gerard; Ben-Akiva, Moshe; Baak, Jaap (2010): Method Report-Logistics Model in the Swedish National Freight Model System (Version 2).
 Deliverables 6B for the SAMGODS group. Significance. Den Haag

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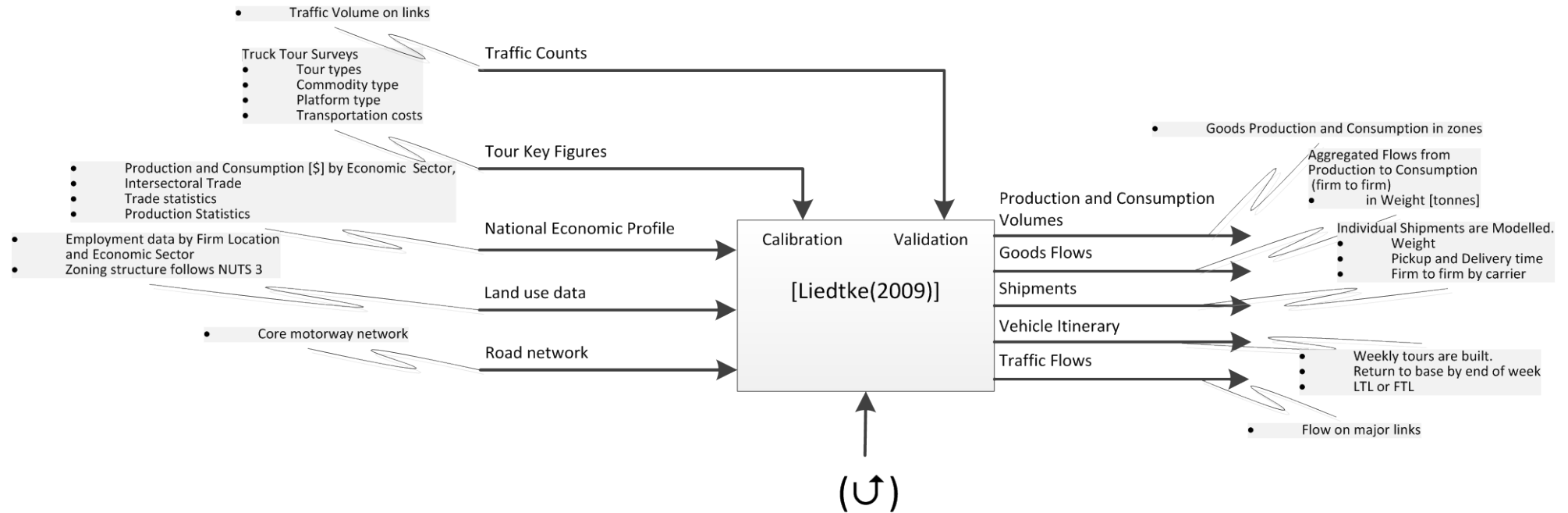


Model Name : Liedtke(2009)

Citation : Liedtke, Gernot (2009): Principles of micro-behavior commodity transport modeling. In Transportation Research Part E: Logistics and Transportation Review 45 (5), pp. 795–809.

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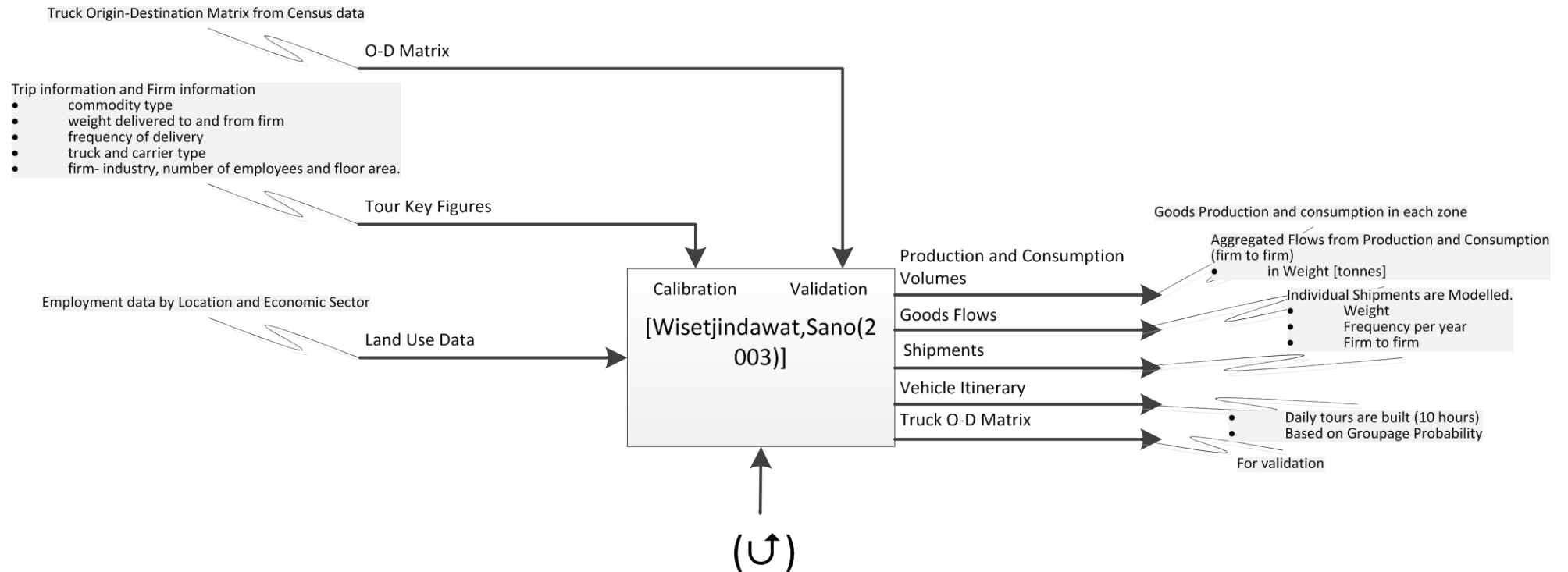


Model Name : Wisetjindawat,Sano(2003)

Citation : Wisetjindawat, W; Sano, K (2003): A Behaviour Modelling in Micro-Simulation for Urban Freight Transportation. In Journal of Eastern Asia Society for Transportation Studies 5, pp. 2193–2208

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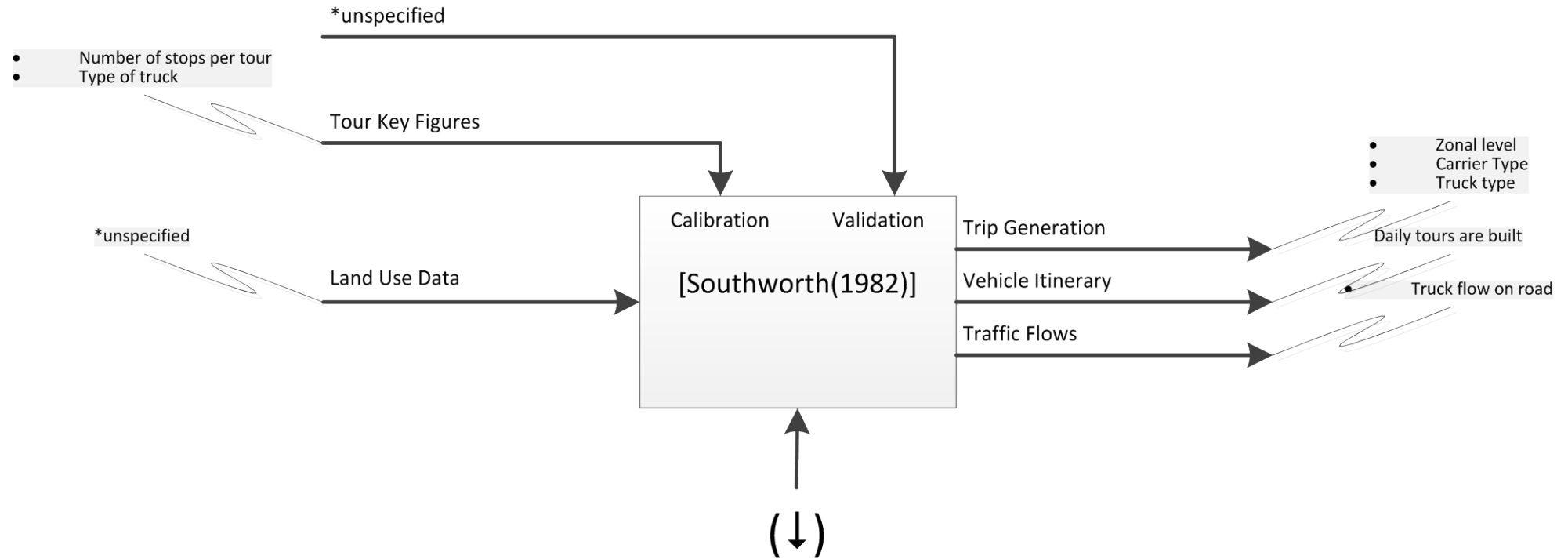


Model Name : Southworth(1982)

Citation : Southworth F. An urban goods movement model: Framework and some results. Papers in Regional Science 1982, 50(1): 165-184

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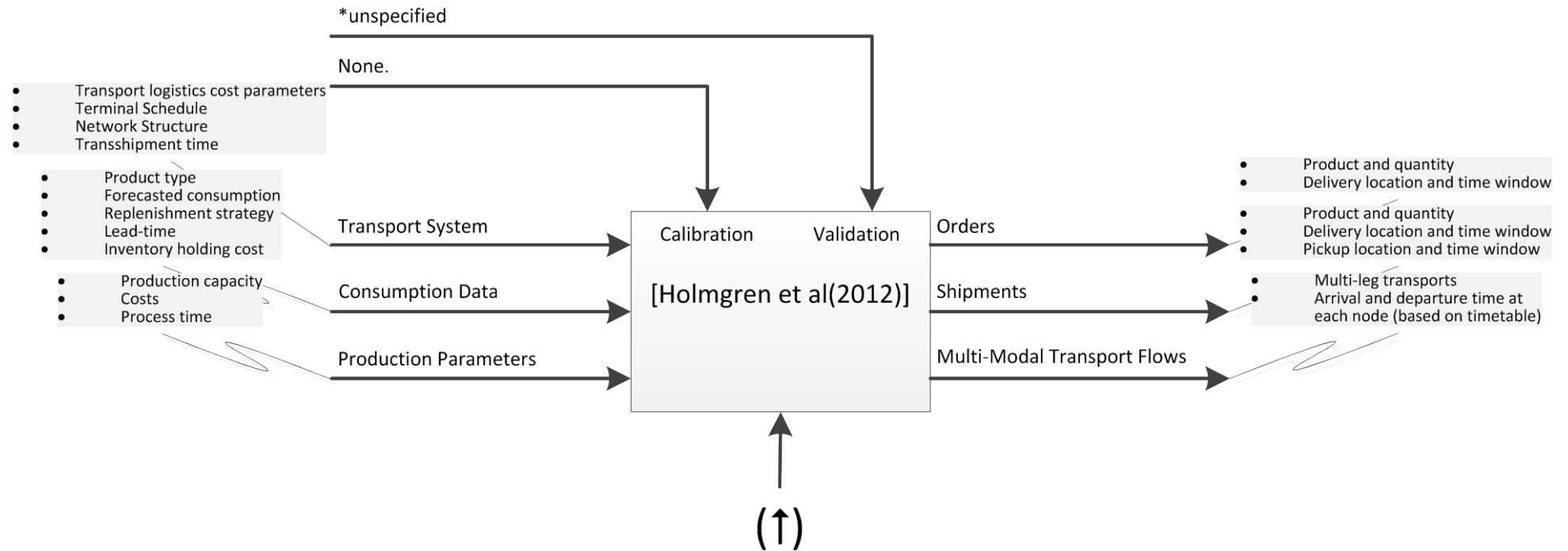


Model Name : Holmgren_et_al(2012)

Citation : Holmgren, Johan; Davidsson, Paul; Persson, Jan A.; Ramstedt, Linda (2012): TAPAS: A multi-agent-based model for simulation of transport chains. In Simulation Modelling Practice and Theory 23, pp. 1–18.

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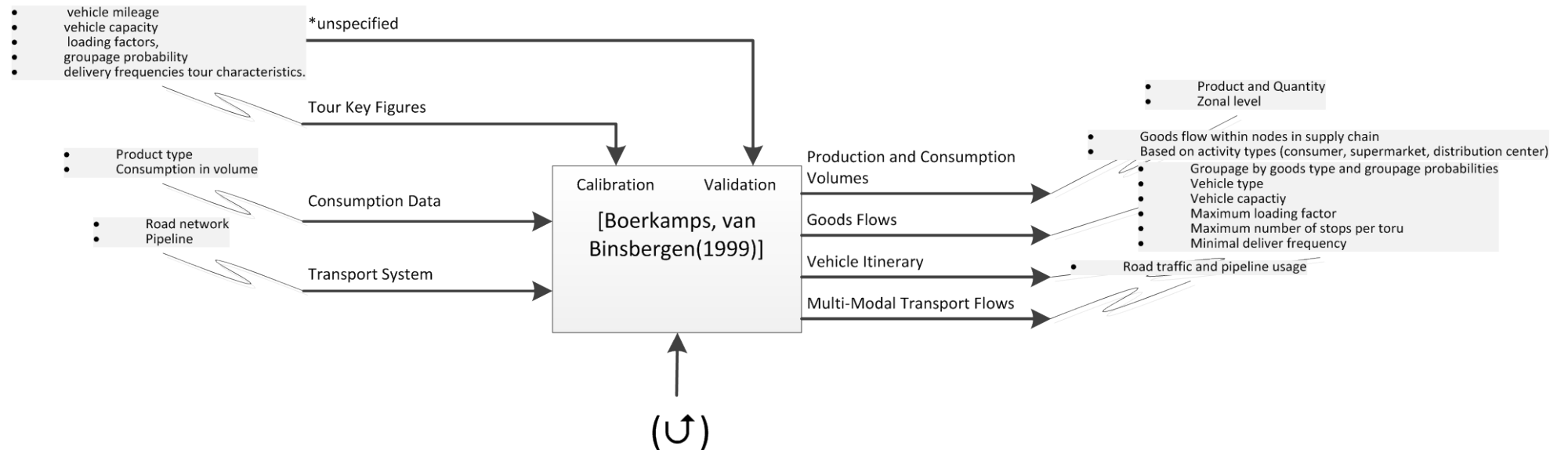


Model Name : Boerkamps_van_Binsbergen_(1999)

Citation : Boerkamps, Jeroen; van Binsbergen, Arjan (1999): Goodtrip - A new approach for modelling and evaluation of urban goods distribution. In : Urban transport Systems. 2nd KFB-Research Conference. Lund, 7 - 8 June. KFB. Lund, Sweden: Lund University, Department of Technology and Society

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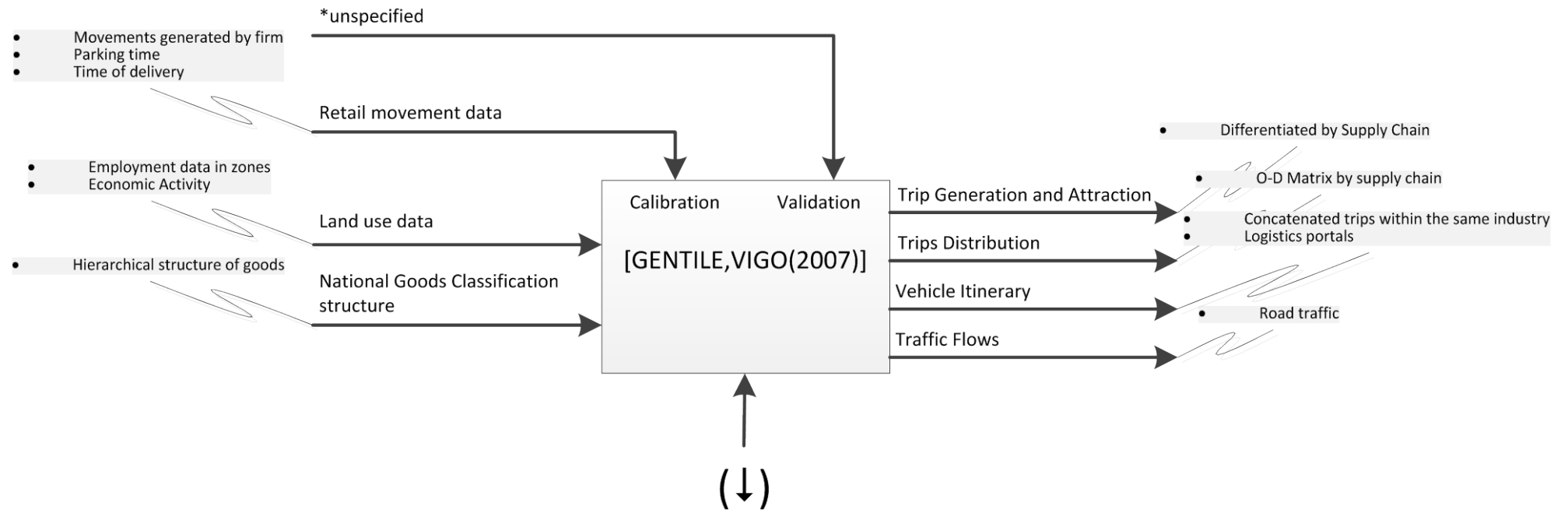


Model Name : Gentile,Vigo(2007)

Citation : Gentile, Guido; Daniela, Vigo (2007): Movement Generation and Trip Distribution for Freight Demand Modelling Applied to City Logistics. Technical Report DEIS OR.INGCE 2007/3. Università di Bologna, Dipartimento di Elettronica Informatica e Sistemistica. Available online at <http://guidogentile.sistemaits.com/publication/>.

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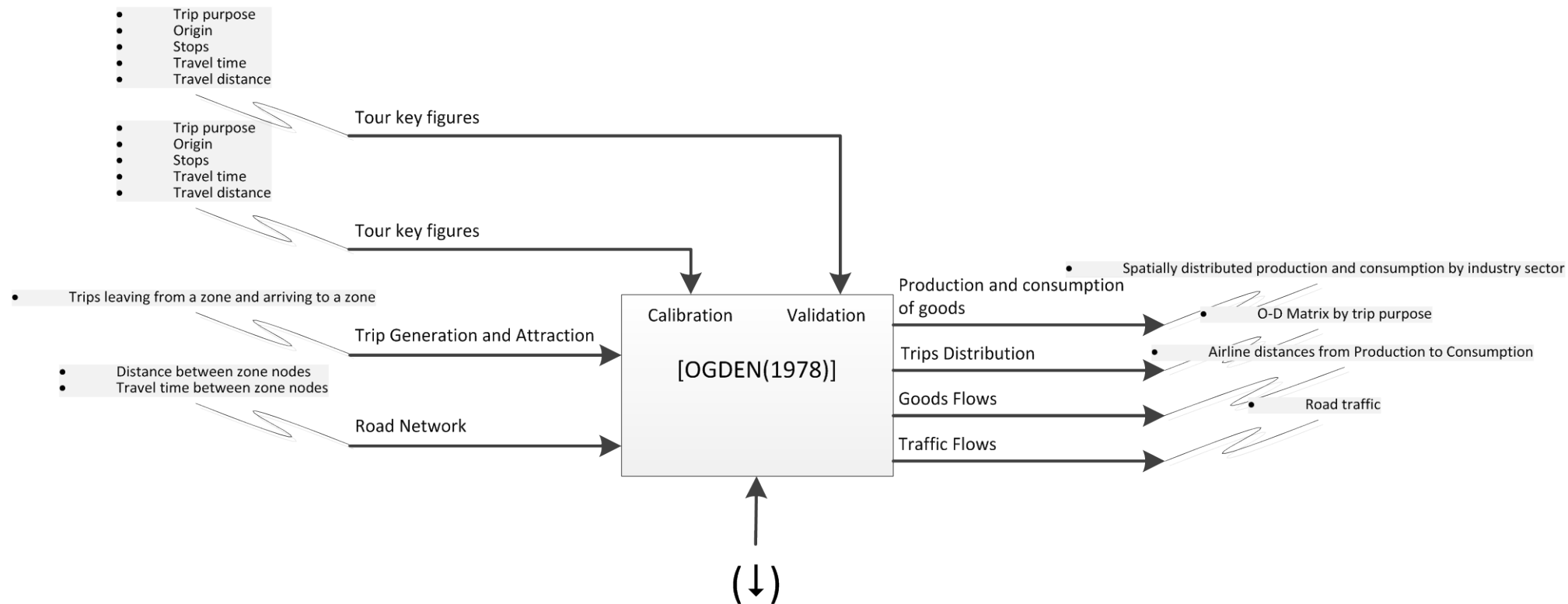


Model Name : Ogden(1978)

Citation : Ogden, K. W. (1978): The distribution of truck trips and commodity flow in urban areas: A gravity model analysis. In Transportation Research Part A 12 (2), pp. 131–137.

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