

Transport – an Instrument for Globalization

Hermann Witte

Hochschule Osnabrück (DE)

Transport is generally an instrument for globalization. It is not possible to use transport as an instrument for de-globalization. For compensating the negative effects of globalization on regional and local markets, a world-wide sustainable development process is to be started. This is an idea propagated by United Nations since the publishing of the Brundtland-Report. Sustainability has three components: the social, the ecological and the economic sustainability.

Economic sustainability is realized when the (transport) enterprises make no profits and setting the prices is following a price-wage-rule. This rule postulates that the price and wage have to be equal. However, transport can also set incentives for social and ecological sustainability. Transport is no instrument for de-globalization, but an important instrument for compensating the negative effects of globalization. The measures which transport policy has to realize sustainability are not new, but we need a new world-wide concept for transport policy. We have to accept, that the world is one economic area and not more than two hundred areas. We need only one set of economic rules and not over hundred different sets of rules.

Keywords: transport, transportation, globalization, sustainability, social sustainability, ecological sustainability, economic sustainability.

1. INTRODUCTION

The idea to implement transport as an instrument for de-globalization cannot be said to be successful, just on the basis of the general focus on transport¹. Transport is implemented as an instrument for a spatial over-come of goods, people, and news. Transport has the task to overcome the separation of supply and demand. The better the transport system, the greater the availability of distances. It is possible to bridge a greater physical distance between supply and demand.

The capacity of bridging spatial distances by transport is not new. The history of transport has been demonstrating the overcoming of great spatial distances very early. Emphasis is to be put on the early sea- and trade routes, such as the 'the Silk

Route'². These examples point out to the fact that the mankind used transport as an instrument of globalization very early. Nowadays, means of transport and transport routes have been developed well. Thus, they have been able to offer a broad basis to the current globalization wave to enable a comprehensive geographical coverage of the world.

Early globalization can be designated - by contrast - as a punctual globalization.

The comprehensive geographical coverage has a powerful opposition. The opposition has always been active at high-ranked political events to demonstrate against globalization and its disadvantages. Above all, disadvantages have been seen in the obstruction of regional and local economic activities. Disadvantages are surely considered as crucial and require the search for solutions.

¹ See Voigt, F.: Verkehr, 2. Bd., 1. a. 2. Hälfte, Die Entwicklung des Verkehrssystems, Berlin 1965.

² See Voigt, F.: Verkehr, 2. Bd., 1. Hälfte, p. 362

Generally, the search for solutions can go in two directions. Firstly, one can be against globalization and try to block or inhibit it respectively. Secondly, one can search an economic policy solution.

It allows a co-existence of regional and local, as well as global economic activities. The second method is to be taken into consideration here, because it seems to be the more successful one; because globalization has reasons which are neither to be neglected nor prevented.

In search of an economic policy solution, it is important to look for the reasons for globalization. Based on these particular reasons, an economic policy concept can be developed, compensating for the disadvantages of globalization.

2. REASONS FOR CURRENT GLOBALIZATION

It is difficult to recognize the reasons for the early globalization from the today's point of view. Discovery urge, conquest striving, and trading intent have always been mentioned. These particular reasons are not quite to be neglected today. However, there is an economic reason for the current globalization. Today there is an obligation to globalize because of the changes in the technical-economic sector. Increase of the production velocity is a result of the technical progress causes large production output, which can only be sold by a global market.

$$(1) \text{ Production Velocity (PV) = Output (O) per time unit (t) } \rightarrow \text{PV} = \text{O}/\text{t}$$

Today, in many sectors, production technology has reached a good status bringing a considerable increase of the production output.

$$(2) \text{ Output = Production Velocity times time } \rightarrow \text{O} = \text{PV} \cdot \text{t}$$

The car industry is an example for an increased production velocity and the increased production output. Years ago - for example - 40 cars were produced daily - (PV = 40 cars/daily \rightarrow 14 600 cars yearly = 40 cars/daily \cdot 365 days).

Today, because of a new production technology, the production velocity is at 400 cars daily (PV = 400 cars/daily \rightarrow 400 cars = PV \cdot day \rightarrow 146 000 cars yearly = 400 cars/daily \cdot 365 days).

Sales markets have to be opened for these increased production outputs. Unless new and wide-ranging markets are developed, task distribution pitfalls appear. As a consequence, the economy becomes more and more inefficient. Task distribution has always been the principle of creating more prosperity. Humanity has been creating prosperity for generations through task distribution. Primitive societies created low levels of prosperity. Mankind was just interested in provision and production for the sake of its own consumption. Task distribution (specialization) and production for many customers (increasing production output) have resulted in an increased prosperity.

However, it is impossible to increase prosperity at will. Adam Smith³ (1776) has already described the task distribution pitfall and thus the resulting decrease of prosperity. This happens every time sales markets are unable to receive the increased production output due to the division of task distribution pitfall. This is the case - whenever small, saturated, weakened by crisis, and/or highly competitive markets appear.

Based on the production velocity increase (production output per time unit) caused by the technical progress many goods are for the local market or respectively for many companies too small. A necessity is developing to search globally customer markets or to introduce globalization respectively.

Globalization has been improved considerably by the quality of transport performance (designated as communication significance⁴) in the global transport system, and the resulting considerable decreased transport costs throughout the last decades. Japan is an example for the success of globalization. There were no, or hardly any Japanese products respectively available in large

³ See. Smith, A.: *Untersuchung über Wesen und Ursachen des Reichtums der Völker*, 1. Bd. (aus dem Englischen übersetzt von M. Streissler, hrsg. v. E.W. Streissler), Düsseldorf 1999, p. 89 – 100, esp. pp. 89, 92, p. 101 - 104

⁴ See Voigt, F.: *Verkehr und Industrialisierung*, in: *Zeitschrift für die gesamte Staatswissenschaft*, 109. Bd. (1953), p. 193 – 239; Tarski, I.: *Czynnik Czasu W Procesie Transportowym*, Warszawa 1976; Bronk, H./Witte, H.: *An Integrated Price and Quality Approach for Modelling Passenger Transport Demand*, in: *Folia Oeconomica Stetinensia*, No. 2 (10) 2003, p. 319 – 335; Babis, H.: *Kształowanie Jakości Towarowych Usług Transportowych*, Uniwersytet Szczeciński, Seria: *Rozprawy I Studia* Nr 2, Szczecin 1986

quantities on the global market centuries ago. It was not until the end of the last century when Japanese products were transported in huge quantities to Europe and North America.

Technical progress has also led to an increase of the production velocity in the transport sector, and thus it has led to an increase of transport performance (persons per kilometre, or tons per kilometre respectively). As a consequence, it was possible to decrease transport costs considerably. This fact again has contributed to the growth in the transport volume (people or tons respectively).

Thus, transport has been demonstrating itself clearly as a globalizing supporter. One can hardly recognize any chances of success in de-globalization – by avoiding the advancement of technical progress in the transport sector. History has taught us that technical progress has always prevailed whenever it has led to the performance of the production as well as to the increase of the usage of the innovator and user. This does not mean that the implementation of technical progress does not have any undesired, mostly neglected or underestimated side effects in form of a deterioration of life quality for mankind.

Thus, it has always been the objective of mankind to compensate the negative effects of the technical progress. The following explains first: advantages and disadvantages of globalization. Next to particular measures of compensating, disadvantages of globalization have to be found. Finally, the significance of transport for compensating disadvantages of globalization has to be discussed.

3. ADVANTAGES AND DISADVANTAGES OF GLOBALIZATION

Different regions in the world have not provided the same production factors. Consequently, different life conditions have to be developed. Globalization offers the advantage to enable a global compensation of different life conditions by using the production factors globally, and by distributing the final products globally. They can obtain an alignment of various living conditions.

Unfortunately, at this time an alignment of the globally different life conditions is not recognizable.

On the contrary, globalization provides for enforcement and expansion of the differentiated global life conditions. Regional and local markets have always been influenced negatively by

globalization. Increased production velocity, and increased production output cause a concentration of production in just a few global regions. However, output concentration does not go parallel with a concentration of capital. Assets of output are concentrated mostly in other regions of the world. New jobs have to be created - wherever concentration output is established, while they are being lost in other regions.

Consequence of the global new-distribution and production concentration have always led to uneven distributions and assets. Capital concentration enforces the existing differences in the uneven distribution.

In other words, globalization has a positive and a negative side. Important is supporting the advantages and using them for a global compensation of life conditions. Possible solutions are explained in the following. It is assumed that the current economic concept must be changed. In other words, old concepts have to be removed from all doubts from people's minds and new ones familiarized. This follows from the fact that the old concepts have been - until recently - taken for granted - with recognizable approaches now and then. However, solutions to the old problem situations have not been found yet.

4. MEASURES TO COMPENSATING DISADVANTAGES OF GLOBALIZATION

One finds a multitude of new economic conceptions⁵ by reviewing the economic literature.

⁵ See a.o. Grefe, C.: *Global Gardening. Bioökonomie – neuer Raubbau oder Wirtschaftsform der Zukunft?* München 2016; Müngersdorff, J./Müngersdorff, R.: *Urban Gardening im Unternehmen: die dynamisch-vernetzte Organisation: wie Communities jenseits des Organigramms Potenziale freisetzen und Wandel ermöglichen*, in: Hollmann, J./Daniels, K. (Hrsg.): *Anders wirtschaften: integrale Impulse für eine plurale Ökonomie*, 2. Aufl., Wiesbaden 2017, p. 73 – 98; Antoni-Komar, I.: *Urban Gardening, Food Coops, Community Supported Agriculture: transformierte Wirtschaftsformen – Konsumpraktiken – Marktbeziehungen*, in: *Haushalt in Bildung & Forschung: Gesundheit, Umwelt, Zusammenleben, Verbraucherfragen, Schule und Beruf*, Bd. 5 (2016), p. 82 – 96; Thomas, H./Logan, C.: *Mondragon – An Economic Analysis*, London 1982; Richter, T.: *Solidarische Ökonomie: neue Wirtschaftsformen und alternative Entwicklungen*, Hamburg 2013; Acosta, A.: *Das „Buen Vivir“: Die Schaffung einer Utopie*, in: *Juridikum, Zeitschrift für Kritik, Recht, Gesellschaft*, Nr. 4 (2009), p. 219- 223; Acosta, A.: *Buen vivir: vom*

On closer inspection – however - many concepts turn out to be “old wine in new skins“. Difficult, but promising seems to be the approach of the United Nations initiating a global sustainable developing process.⁶ This particular sustainable developing process should contain a social, ecological, and economical component. One may refer to a social, ecological, and economical sustainability. The concept of the United Nations requires a change of thinking regarding the social, ecological, and economic activities. In the economic sector its aim is, on the one hand, to take a safe distance from the open national economy. The model of the closed national economy which has been globally designed becomes valid. Then again the concept of the United Nations requires getting a grip on the perennial unsolved problem of “poor“ and “rich“. This has been a very old problem - unsolved in socialism, as well as in various clerical social doctrines.

Thus, enforcement of the idea of the United Nations of a global sustainable developing process in a new economic system designated as a sustainable marketing system can be enforced. The new economic system can neither be completely presented nor discussed in this frame work. An indication to the relevant literature should be sufficient.⁷

Recht auf ein gutes Leben: das Wissen der Anden für eine Welt jenseits des Wachstums, 2. Aufl., München 2016; Konkin III, S.E.: An Agorist Primer, Huntington Beach, Cal. 2008; Corneo, G.: Bessere Welt. Hat der Kapitalismus ausgedient? Eine Reise durch alternative Wirtschaftssysteme, Berlin 2014; Böhme, G. (Hg.): Alternative Wirtschaftsformen, Bielefeld 2012; Cockshott, W.P./Cottrell, A.: Alternativen aus dem Rechner. Für sozialistische Planung und direkte Demokratie, 2. Aufl., Köln 2012 (20061); Niesslein, E.: Humane Marktwirtschaft. Ökonomische Aspekte der Umweltpolitik, Freiburg (Breisgau) 1981; Ruh, H.: Ordnung von unten. Die Demokratie neu erfinden, Zürich 2011; Ulrich, P.: Zivilisierte Marktwirtschaft, Bern 2010 (20051); Hauff, M.v.: Von der Sozialen zur Nachhaltigen Marktwirtschaft, in: ders. (Hg.): Zukunftsfähigkeit der Sozialen Marktwirtschaft, Marburg 2007, p. 349 – 392

⁶ See Hauff, V. (Hrsg.): Unsere gemeinsame Zukunft. Der Brundtland-Bericht, Greven 1987

⁷ See Witte, H.: Die nachhaltige Marktwirtschaft. Wohlstand ohne *self-made* Krisen? Berlin 2013 (Sustainable Market Economy. Welfare without self-made crises? Zürich 2015; La economía de mercado sustentable. Bienestar sin crisis autogeneradas? Bahia Blanca 2016)

Sustainable marketing is based on a value related production function because the global sustainable developing process has to be started logically from the bottom of the individual companies and their production processes. Profits of company proceeds, costs for work input (wage costs), and costs for invested capital (capital costs) connect to value related production functions.

On the basis of this particular production function the economic compensation of “poor“ and “rich“ can be demonstrated to be given – whenever the prices of the produced goods correspond to the wage costs (wage-price-rule)⁸. Thus, companies do not make any profits (profit = 0). They realize - the well-known cost covering principle⁹ from literature instead of the profit maximization principle.

With the economic sustainability a basis for the implementation of social and ecological sustainability has been created. However, its measures are not possible to be implemented at a hundred per cent. However, sustainable marketing is unable to equalize incomes and assets. Although, this has often been requested in specialized literature by socially oriented authors. The model of the sustainable marketing demonstrates that this request can only be fulfilled when equal production costs for all goods are given. Since goods have and always will have – as it is common knowledge – differentiated high production costs – this request is utopia. However, sustainable marketing causes a distribution of incomes and assets, which do not deviate too far from equal distribution.

⁸ See Witte, H.: Die nachhaltige Marktwirtschaft, pp. 125 – 135

⁹ See Kirsch, H.: Kostendeckung als Unternehmensziel, Aachen 1992; Thiemeyer, T.: Möglichkeiten und Grenzen der Kostendeckung im Bereich der Infrastruktur, in: Archiv für öffentliche und freigemeinnützige Unternehmen (Zeitschrift für Strukturlehre der Einzelwirtschaften und für Einzelwirtschaftspolitik), Bd. 11 (1979), p. 209 – 221; Enderlein, H.: Die Kostendeckung für die Verkehrswege in der Bundesrepublik Deutschland, in: DIW-Wochenbericht, Bd. 44 (1977), p. 401 – 405; Böttger, W.: Um das Kostendeckungsprinzip bei Kanalbauten: das Beispiel des Rhein-Maas-Kanals, in: Zeitschrift für Verkehrswissenschaft, Bd. 30 (1959), p. 146 – 153; Unnerstall, H.: Das Prinzip der Kostendeckung in der EU-Wasserrahmen-richtlinie, in: Zeitschrift für europäisches Umwelt- und Planungsrecht, Bd. 4 (2006), p. 29 - 36

5. SIGNIFICANCE OF TRANSPORT FOR COMPENSATING DISADVANTAGES OF GLOBALIZATION

Having demonstrated that transport is not an instrument of de-globalization but it actually enables globalization, the issue still remains: what is actually the contribution of the transport sector to the disadvantages of globalization in the frame of a sustainable marketing.

The issue can easily be discussed. The transport sector can contribute to the realization of the social, ecological, and economical sustainability because it implements itself in its sector the social, ecological, and economical sustainability. It is impossible to consider all conceivable measures in detail in this framework. Only some distinctive measures are intended to be discussed.

At first the realization of the economical sustainability will be discussed. This is given for the transport sector if every company in this particular transport sector is unable making any profits and the wage-price-rule is applied. Without doubt the demand can be implemented in the transport sector. Public transport systems are supposed to operate according to the cost covering principle and not according to the profit maximization principle. However, it is essential to maintain the cost covering principle and that not a funding shortfall (losses) is obtained, which has to be compensated by government substances. Furthermore, private transport companies have to be obligated to apply the cost covering principle.

Social sustainability can be triggered – among other things – in not being extensively financed by national debt burdening future generations, without having a corresponding benefit from the transport infrastructure.

The measure catalogue to realize ecological sustainability is very extensive. Technical progress should not be applied increasing the product velocity in the transport sector, but also in the enhancement of environmentally friendly transport. Environmentally friendly drive systems, environmentally friendly fuels, etc. are under consideration.

Ultimately, there is a high significance in the transport sector in compensating the disadvantages of globalization. Realization of measures in the three sectors of sustainability, social, ecological, and economical sustainability offers a corresponding great scope.

6. CLOSING REMARKS

Transport has been presented as a general instrument for globalization which is not acceptable for de-globalization. However, transport is able to contribute with corresponding measure to the realization of social, ecological, and economic sustainability. Realization of sustainability in the form of implementing a global sustainable developing process propagated by the publication of the Brundtland-Report is a possible approach, compensating for negative effects of the globalization.

Concentration tendencies of production potentials and capital in some areas in the world, as well as drainage tendencies in regional and local markets in other areas in the world, on the basis of job losses with negative effects on the world wide distribution of incomes and assets, can be counteracted by realizing a worldwide sustainable developing process. Negative effects of globalization can be compensated. The transport sector can provide an insignificant contribution to the social, ecological, and economic sector. Appropriate measures have been demonstrated in this particular contribution. These measures are not new and can definitely be implemented in a worldwide de-signed transport policy.

REFERENCES

- [1] Acosta A., *Buen vivir: vom Recht auf ein gutes Leben: das Wissen der Anden für eine Welt jenseits des Wachstums*, 2nd ed., München 2016.
- [2] Acosta A., Das „Buen Vivir“. *Die Schaffung einer Utopie*, Juridikum. Zeitschrift für Kritik. Recht, Gesellschaft, (2009)/4, pp. 219-223.
- [3] [Antoni-Komar I., *Urban Gardening, Food Coops, Community Supported Agriculture: transformierte Wirtschaftsformen–Konsumpraktiken–Marktbeziehungen*, [in:] *Haushalt in Bildung & Forschung: Gesundheit, Umwelt, Zusammenleben, Verbraucherfragen, Schule und Beruf*, vol. 5 (2016), pp. 82-96.
- [4] Babis H., *Kształtowanie jakości towarowych usług transportowych*, Wydawnictwo Politechniki Szczecińskiej, Szczecin 1986.
- [5] Böhme G. (ed.), *Alternative Wirtschaftsformen*, Bielefeld 2012.
- [6] Böttger W., *Um das Kostendeckungsprinzip bei Kanalbauten: das Beispiel des Rhein-Maas-Kanals*, Zeitschrift für Verkehrswissenschaft, 30 (1959), pp. 146-153.
- [7] Bronk H., Witte H., *An Integrated Price and Quality Approach for Modelling Passenger Transport Demand*, Folia Oeconomica Stetinensia, 10 (2003)/2, pp. 319-335.

- [8] Cockshott W. P., Cottrell A., *Alternativen aus dem Rechner. Für sozialistische Planung und direkte Demokratie*, 2nd ed., Köln 2012.
- [9] Corneo G., *Bessere Welt. Hat der Kapitalismus ausgedient? Eine Reise durch alternative Wirtschaftssysteme*, Berlin 2014.
- [10] Enderlein H., *Die Kostendeckung für die Verkehrswege in der Bundesrepublik Deutschland*, DIW-Wochenbericht, 44 (1977), pp. 401-405.
- [11] Grefe C., *Global Gardening. Bioökonomie – neuer Raubbau oder Wirtschaftsform der Zukunft?*, München 2016.
- [12] Hauff M. v., *Von der Sozialen zur Nachhaltigen Marktwirtschaft*, in: Hauff M. v. (ed.), *Zukunftsfähigkeit der Sozialen Marktwirtschaft*, Marburg 2007, pp. 349-392.
- [13] Hauff V. (ed.), *Unsere gemeinsame Zukunft. Der Brundtland-Bericht*, Greven 1987.
- [14] Kirsch H., *Kostendeckung als Unternehmensziel*, Aachen 1992.
- [15] Konkin III S. E., *An Agorist Primer*, Huntington Beach, California 2008.
- [16] Müngersdorff J., Müngersdorff R., *Urban Gardening im Unternehmen: die dynamisch vernetzte Organisation: wie Communities jenseits des Organigramms Potenziale freisetzen und Wandel ermöglichen*, [in:] Hollmann J., Daniels K. (ed.), *Anders wirtschaften: integrale Impulse für eine plurale Ökonomie*, 2nd ed., Wiesbaden 2017, pp. 73-98.
- [17] Niesslein E., *Humane Marktwirtschaft. Ökonomische Aspekte der Umweltpolitik*, Freiburg im Breisgau 1981.
- [18] Richter T., *Solidarische Ökonomie: neue Wirtschaftsformen und alternative Entwicklungen*, Hamburg 2013.
- [19] Ruh H., *Ordnung von unten. Die Demokratie neu erfinden*, Zürich 2011.
- [20] Smith A., *Untersuchung über Wesen und Ursachen des Reichtums der Völker*, vol. 1 (translated from English by M. Streissler, ed. by E. W. Streissler), Düsseldorf 1999.
- [21] Tarski I., *Czynnik czasu w procesie transportowym*, Warszawa 1976.
- [22] Thiemeyer T., *Möglichkeiten und Grenzen der Kostendeckung im Bereich der Infrastruktur*, Archiv für öffentliche und freigemeinnützige Unternehmen (Zeitschrift für Strukturlehre der Einzelwirtschaften und für Einzelwirtschaftspolitik), 11(1979), pp. 209-221.
- [23] Thomas H., Logan C., *Mondragon – An Economic Analysis*, London 1982.
- [24] Ulrich P., *Zivilisierte Marktwirtschaft*, 2nd ed., Bern 2010.
- [25] Unnerstall H., *Das Prinzip der Kostendeckung in der EU-Wasserrahmenrichtlinie*, Zeitschrift für europäisches Umwelt- und Planungsrecht, (2006)/4, pp. 29-36.
- [26] Voigt F., *Verkehr und Industrialisierung*, Zeitschrift für die gesamte Staatswissenschaft, 109 (1953), pp. 193-239.
- [27] Voigt F., *Verkehr*, vol. 2, Pt. 1-2: *Die Entwicklung des Verkehrssystems*, Berlin 1965.
- [28] Witte H., *Die nachhaltige Marktwirtschaft. Wohlstand ohne self-made Krisen?*, Berlin 2013 (*Sustainable Market Economy. Welfare without self-made crises?*, Zürich 2015; *La economía de mercado sustentable. Bienestar sin crisis autogeneradas?*, Bahia Blanca 2016).

Hermann Witte
Hochschule Osnabrück, (DE)
h.witte@hs-osnabrueck.de