

Unit V 2: Mobility

1. Summary

Mobility is a basic human need. This is evident in everyday life, but also in travel and tourism.

2.3 The need for mobility

One of the most important needs of the modern age is the need for mobility. Mobility is a central component of personal freedom and makes it possible to freely choose where to live and work. Moreover, it is mobility that makes access to educational opportunities possible in the first place. However, not only the need for mobility varies, but also the opportunities and offers.

The need for mobility is also increasing objectively: according to forecasts, 70% of people will live in urban areas - i.e. in cities and agglomerations - by 2040, whereas today the figure is only 40-50%, depending on estimates. This creates - according to Vögeli in Neue Zürcher Zeitung of 21.9.2016:10 - an enormous market potential. But why actually? Because people in cities are and want to be much more mobile than people living in rural areas.

Many new offers - and demands - are emerging in the mobility market:

- The sharing economy - i.e., such as car sharing - accounted for just 0.95% of the gross domestic product in Switzerland in 2016, but even this small share generated around 6 billion Swiss francs annually (see Vögeli in Neue Zürcher Zeitung, Sept. 21, 2016:10).
- Transportation experts see enormous potential in autonomous, self-driving and electrically powered vehicles. The idea: "You type in your mobility needs via an app, are picked up at home and reach your destination on time and relaxed" (Vögeli in Neue Zürcher Zeitung of 21.9.2016:10). However, this vision is likely to be countered by the touch of "freedom and adventure" in one's own, self-driven car, which has been so successfully cultivated by the automotive industry.
- Furthermore, integrated platforms and services will play a decisive role in the future. So-called "shared mobility" will become established: "People will no longer be able to

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access just one means of transport, but will be able to put together individual mobility chains. The experience of other industries (for example, media) shows that money can be earned by operating the platforms, no longer primarily by producing the content" (Vögeli in Neue Zürcher Zeitung, 21.9.2016:10).

The need for mobility is covered by society as a whole via the various means of transport and communication. Unlike other goods and services, which become cheaper with greater quantity, the cost of transport increases with increasing population density. This is - for instance in Switzerland - partly also intended, as for instance the Federal Council's concept of financing transport shows (cf. Schneeberger in Neue Zürcher Zeitung of 23.7.2012a). For example, as of 2013, participation contributions from public transport passengers are to go not only to operating costs but also to railroad infrastructure. At the same time, freeway tolls and mineral tax surcharges are to be increased, which in turn will have to be paid by consumers.

On the one hand, mobility is a basic need, but it can also be a substitutive need: For example, if there are no or not enough jobs in a certain region, mobility in the form of commuting is often the only way to remain in the labor market. According to the Swiss Federal Statistical Office (BFS), 3.7 million people commuted to work in Switzerland in 2011. Of these, 55% commuted by car or motorcycle, 29% by public transportation, and 16% by bicycle or on foot (Neue Zürcher Zeitung, May 31, 2013a). 37% of commuters needed less than 15 minutes to get to work, 31% needed 15 to 30 minutes. More than 20% were on the way to work between half an hour and an hour and about 10% even more than an hour (Neue Zürcher Zeitung of 5/31/2013a). Even if there has been a slump in terms of traffic development in the Corona year 2020 - the demand for mobility in public and private transport will undoubtedly continue.

However, uncovered costs arise in different forms for road and rail: "While in the case of public transport ... it is primarily the uncovered operating costs that are important, in the case of MIV (= motorized private transport, note CJ) the focus is on the uncovered external costs, for example those for noise and air pollution" (Balmer in Die Volkswirtschaft 12-2013a:5). Because these costs are part of the operating account in public transport, it

appears - in contrast to private transport - as being in deficit, whereas in private transport the external costs do not appear in the account at all.

In 2014, a new procedure made it possible to calculate the external costs of mobility in rail and road transport more precisely. In a study commissioned by the Federal Office for Spatial Development (Are) for the year 2010, the so-called external costs of transport in Switzerland were calculated. External costs were defined as all those costs that are not paid by the users directly, but by the general public (cf. Forster in *Neue Zürcher Zeitung*, 1.7.2014:10). These included in particular air pollution, CO2 emissions, accidents and noise. These external costs amounted to 9.4 billion Swiss francs in 2010. Of this, 7.7 billion or 82% was generated by road transport and 730 million francs or 8% by rail transport. In addition, air transport generated external costs of 920 million francs or 9%, and shipping 60 million francs or 1% (see Forster in *Neue Zürcher Zeitung*, July 1, 2014:10).

It is also of interest how transport and mobility costs are distributed differently across the individual income groups of the population (cf. Fischer et al. in *Die Volkswirtschaft* 10-2011b:25).

It is noticeable that the high and highest incomes pay only insignificantly more for mobility in absolute terms than the low-income population groups. Therefore, the lower the income, the greater the - relative - financial burden for transport and mobility.

It is interesting to note that studies have not shown a strong correlation between accessibility improvements of individual regions - i.e. their transport accessibility - and economic growth (cf. Bruns/Buser in *Die Volkswirtschaft* 10-2011a:12). Nevertheless, Bruns/Buser (in *Die Volkswirtschaft* 10-2011a:12) stated: "From a growth policy perspective, transport infrastructure or good accessibility is a necessary framework condition for growth". However, due to the simultaneous growth of accessibility and economy, it could never be empirically proven whether this is actually true (cf. Bruns/Buser in *Die Volkswirtschaft* 10-2011a:12).

It is also striking that mostly unquestioned a massive growth of the need for mobility and thus for transport services is assumed in the next decades. Thus, many forecasts in Switzerland assume a traffic growth of up to 50% for the period until 2030 (cf. Schneeberger in *Neue Zürcher Zeitung*, July 23, 2012a or Balmer in *Die Volkswirtschaft* 12-2013a:4). At the same time, transport costs for users have already increased more than the national consumer price index in the last 20 years. For example, the price of a liter of unleaded gasoline increased by 67% from 1990 to 2012, and that of a second-class rail ticket by 50% (see Schneeberger in *Neue Zürcher Zeitung*, July 23, 2012a).

In the discussion about mobility and transport, air traffic should not be forgotten. On the one hand, it is becoming cheaper and cheaper, and on the other hand, its social and ecological costs are increasing. In 2013, the company Airbus calculated 36,650 passenger aircraft worldwide for 2032, compared to 17,740 in 2013 (see Brändle in *Neue Luzerner Zeitung* of 26.9.2013). Accordingly, an additional annual CO₂ emission of more than five billion tons is expected by 2032 (cf. Brändle in *Neue Luzerner Zeitung* of 26.9.2013). If you consider that the harmfulness of CO₂ emissions from airplanes is around three times greater than from cars due to the thinner air, then you can calculate what is in store for us. Even slightly cleaner airplanes are of little use here.

The question arises as to whether ever greater mobility is desirable at all, or whether there is an upper limit to the need for mobility. For example, the urban sociologist Vincent Kaufmann (in *Neue Zürcher Zeitung*, 31.5.2013b) is of the opinion that less dense building could lead to people - especially on weekends - being more likely to stay at home. However, today the trend is going in the other direction: fewer and fewer people are moving to another canton - for example after changing jobs - and more and more are commuting. Reasons for this are also often short-term work assignments in other places (cadres) or precarious employment (cf. Kaufmann in *Neue Zürcher Zeitung* of 31.5.2013b). In public transport, for example, the number of kilometers traveled per person in passenger transport has doubled since 1970, and between 2005 and 2010, passenger kilometers traveled by train in Switzerland increased by 19% (Balmer in *Die Volkswirtschaft* 12-2013a:5).

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Although many experts assume that mobility growth will continue unabated in the next 20-30 years, the question arises whether this is realistic and desirable. Balmer (in Die Volkswirtschaft 12-2013a:7) speaks of a "surplus demand for mobility that is not optimal from an economic point of view." Limiting factors are the growing external costs (especially for private road transport) and the limited capacity of the transport networks (especially the rail network, but increasingly also the road network). In addition, the extremely high mobility also leads to other costs, such as health problems as a result of commuting.

A calculation by the University of St. Gallen showed that less occupational mobility would be possible, namely that around 450,000 people in Switzerland could work at home at least one day per week (cf. Krättli/Meier in Beobachter 18/2011:26).

Mobility pricing is an interesting approach, as it is being discussed in the Netherlands, for example, although concerns about data security have led to the failure of the project for the time being (Schneeberger in Neue Zürcher Zeitung, 4.8.2011). But what is meant by mobility pricing? It is about increasing the price per kilometer for mobility for certain means of transport - for example, the car - in order to encourage people to switch to other, cheaper means of transport. For example, by restructuring motor vehicle taxes, which are to be paid as a kilometer tax instead of the current annual flat rate, an incentive is to be created to switch from cars to bicycles for short trips, for example. This would increase motorists' sensitivity to the cost of each kilometer of travel. However, in 2008, the federal parliament refused to act on a road pricing bill, and in 2012 - 2015, the Federal Council relaunched the issue of transport financing, but on a broader basis toward a cross-modal, performance-based mobility levy that operates according to the polluter-pays principle (see Bochud in Die Volkswirtschaft 12-2013b:15). Daniel Müller-Jentsch (in Die Volkswirtschaft 12-2013:16) justifies the need for mobility pricing in Switzerland as follows: First, the current subsidization of transport via tax money fuels demand enormously. Second, the lack of differentiation in pricing leads to an uneven utilization of transport systems. While trains are overcrowded at rush hour, SBB's seat occupancy rate in the regional sector is only 20%. Swiss, on the other hand, has a seat load factor of 81% thanks to differentiated fares. However, it is to be objected here that regional traffic has an important community function, which is not the case with air traffic. Third, according to Müller-Jentsch (Die Volkswirtschaft

12-2013:16), billions would be misdirected by the politicization of investment decisions. As possible forms of mobility pricing, Müller-Jentsch (in Die Volkswirtschaft 12-2013:17) sees the performance-based heavy vehicle fee (LSVA) in Switzerland or the toll in Stockholm or in the Netherlands.

3. Control Questions

1. What role does mobility play in an economy?
2. How are income and mobility related?

4. Links

Mobilitätskosten online berechnen

<https://www.ee-news.ch/de/article/26268/pro-natura-mobilitaetskosten-online-berechnen>

Vergleich der Mobilitätskosten in den Städten Lausanne, Bern und Zürich

http://www.vd.ch/fileadmin/user_upload/organisation/dinf/sm/fichiers_pdf/CMV_SB_1012_30.pdf

5. Cited Literature and further reading

Beobachter

18/2011: Krättli, Nicole / Meier, Peter Johannes: Der mobile Wahnsinn.

Böhm, Paul

2015: Einkommensungleichheit und Reichtum in Deutschland. Empirische Analyse der Bestimmungsgründe. Baden-Baden: Nomos. Dissertation Universität Lüneburg.

Brunetti, Aymo

2013³: Volkswirtschaftslehre. Eine Einführung für die Schweiz. Bern: hep.

Brunetti, Aymo / Grosser, Thilo

2014: Volkswirtschaftslehre. Eine Einführung für Deutschland. Bern: hep.

Bundesamt für Raumentwicklung ARE

2007: Räumliche Auswirkungen der Verkehrsinfrastrukturen. Synthesebericht. Bern.

Die Volkswirtschaft

10-2011a: Bruns, Frank / Buser, Benjamin: Kosten und Nutzen von grossen Verkehrsinfrastrukturprojekten. 9-12.

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- 10-2011b: Fischer, Barbara / Leukert, Karolin / Suter, Stephan / Vaterlaus, Stephan / Zenhäusern, Patrick: Finanzierungsansätze für Verkehrsinfrastrukturen und deren Einfluss auf die Produktivität. 18-21.
- 12-2013a: Balmer, Ueli: Auf dem Weg zu einer koordinierten Verkehrspolitik. 4-7.
- 12-2013b: Bochud, Sarah: Eine Mobilitätsabgabe senkt den Druck auf Strasse und Schiene und fördert das Wachstum. 14-15.
- 12-2013c: Müller-Jentsch, Daniel: Warum die Schweiz ein Mobility Pricing braucht. 16-18.
- Eine Welt
März 2015: Transport. Facts and Figures. 17.
- Faik, Jürgen
2015: Verteilung und Umverteilung von Wohlstand. Bestandesaufnahme und Folgen der sozialen Polarisierung in Deutschland. Tübingen: Mohr Siebeck.
- Frankfurt, Harry
2016: On Inequality. Ungleichheit: Warum wir nicht alle gleich viel haben müssen. Berlin: Suhrkamp.
- Heine, Michael
2013⁴: Volkswirtschaftslehre. Paradigmenorientierte Einführung in die Mikro- und Makroökonomie. München: Oldenbourg.
- Jäggi, Christian J.
2016: Volkswirtschaftliche Baustellen. Analyse – Szenarien – Lösungen. Wiesbaden: Springer Gabler.
2017: Ökologische Baustellen aus Sicht der Ökonomie. Verlierer – Gewinner – Alternativen. Wiesbaden: Springer Gabler.
2018a: Ernährung, Nahrungsmittelmärkte und Landwirtschaft. Ökonomische Fragestellungen vor dem Hintergrund der Globalisierung. Wiesbaden: Springer Gabler.
2018b: Ökologische Ordnung, Nachhaltigkeit und Ethik. Problemfelder – Modelle – Lösungsansätze. Bausteine ökologischer Ordnungen Band 1. Marburg: Metropolis.
2018c: Wirtschaftsordnung und Ethik. Problemfelder – Modelle – Lösungsansätze. Wiesbaden: Springer Gabler.
- Kruip, Gerhard
2009: Globale Gerechtigkeit und Option für die Armen. Konsequenzen für die weltweite Armutsbekämpfung. In: Dabrowski, Martin / Wolf, Judith / Abmeier, Karlies (Hrsg.): Globalisierung und globale Gerechtigkeit. Paderborn: F. Schöningh. Reihe Sozialethik konkret.
- Lachmann, Werner
2016³: Wirtschaft und Ethik. Massstäbe wirtschaftlichen Handelns aus biblischer und ökonomischer Sicht. Münster: Lit Verlag.

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Mäder, Ueli / Jey Aratnan, Ganga / Schilliger, Sarah

2010: Wie Reiche denken und lenken. Reichtum in der Schweiz: Geschichte, Fakten, Gespräche. Zürich: Rotpunktverlag.

Mankiw, N. Gregory

2014⁷: Principles of Economics. Stamford: Cengage Learning.

Mankiw, N. Gregory / Taylor, Mark P.

2014³: Economics. Hampshire UK: Cengage Learning EMEA.

Neue Luzerner Zeitung

26.9.2013: Brändle, Stefan: Doppelt so viele Flugzeuge wie heute.

Neue Zürcher Zeitung

12.7.2011: Alpenländer buttern am meisten in die Schiene.

4.8.2011: Schneeberger, Paul: Die Bahn wird zum Tram, Mobility-Pricing ist in Sicht.

23.7.2012a: Schneeberger, Paul: Spitzen im Verkehr brechen.

23.7.2012b: Schneeberger, Paul: Verkehrsinvestitionen wachsen überproportional.

29.9.2012: Unbezahlt heisst unsichtbar. Unterschätzter Wohlstand – überschätztes Wachstum.

31.5.2013a: 30 Minuten für den Weg zur Arbeit.

31.5.2013b: Kaufmann, Vincent: „Wir sollten Langsamkeit wahren“. Interview.

1.7.2014: Forster, Christof: 9 Milliarden externe Verkehrskosten. 10.

21.9.2016: Vögeli, Heinz: Öffentlicher Verkehr: Die Mobilität der Zukunft. 10.

17.5.2017: Höltschi, René: Was die Wachstumsraten verraten. Eurostat bestätigt BIP-Wachstum um 0,5% im Euro-Raum und belegt grosse Unterschiede zwischen den Staaten. 25.

Thompson, William R. / Reuveny, Rafael

2010: Limits to globalization: North-South divergence. London: Routledge.

Ulrich, Peter

2016⁵: Integrative Wirtschaftsethik. Grundlagen einer lebensdienlichen Ökonomie. Bern: Paul Haupt.

umverkehr

August 2012: ÖV-Test 2012: Vorabdruck. Flyer. Zürich: umverkehr.

VPOD Bildungspolitik

Mai 2013: Gallusser, Martin / Heilmann, Thomas / Ringger, Beat / Schächli, Hans / Wickli, Johannes: Zu reich für den Kapitalismus. 19-24.

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Wallacher, Johannes

2009: Welthandel und Armutsbekämpfung. In: Dabrowski, Martin / Wolf, Judith / Abmeier, Karlies (Hrsg.): Globalisierung und globale Gerechtigkeit. Paderborn: F. Schöningh. Reihe Sozialethik konkret.

Wolfes, Matthias

2016: Wirtschaftsethik als Kapitalismuskritik – Georg Wünschs Modell einer nicht-formalistischen Wertethik und die „autonome Teleologie der Wirtschaft“. In: Casper, Mathias / Gabriel, Karl / Reuter, Hans-Richard (Hrsg.): Kapitalismuskritik im Christentum. Positionen und Diskurse in der Weimarer Republik und der frühen Bundesrepublik. Frankfurt/New York: Campus. 37-78.

Wölfle, Marco

2014: Mikroökonomik im Bachelor-Studium. Berlin: Springer Gabler.