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Growth Slowdowns in Emerging Market  
Economies – The Concept of the Middle-  
Income Trap

With a Special Focus on the Chinese Economy

**Wirtschafts-  
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Dissertation

**Growth Slowdowns in Emerging Market Economies –  
The Concept of the Middle-Income Trap**

**With a Special Focus on the Chinese Economy**

**Inauguraldissertation  
zur Erlangung des Grades einer Doktorin  
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# Introduction<sup>1</sup>

## 1 Background and motivation

Why are some countries rich and others poor, and what can be done about it?<sup>2</sup> This is probably one of the oldest and most central questions of economics. As argued by Lucas (1988),

*“the consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard to think about anything else.”<sup>3</sup>*

One of the earliest contributions on this topic can be probably found in Adam Smith’s book *An Inquiry into the Nature and Causes of the Wealth of Nations* published in 1776. In the following centuries, many economists have tried to identify and analyze the factors and mechanisms that determine cross-country income differences; however, even today, more than 240 years later, these issues are the subject around that the economic (and political) debates evolve and economists continue to refine their theories. Recently, a new phenomenon labelled “middle-income trap” (MIT) has gained increasing attention in the related scientific (and also non-scientific) literature. The term MIT – introduced by Gill and Kharas in 2007 – commonly refers to countries that have experienced rapid growth and thus quickly reached middle-income status, however, they then fail to overcome that income range to further catch up with the developed countries. More precisely, it can be distinguished between absolute and relative MIT definitions. The former interpret the MIT as a prolonged growth slowdown, whereas the latter understand the MIT as a failed catching-up process.

This thesis, consisting of seven essays, analyses the MIT concept from various (empirical and theoretical) standpoints and aims to answer the question of why some countries are caught in this income trap, thereby providing new insights on the determinants and underlying mechanisms of the MIT.

The rest of this Introduction Section is structured as follows. The next Section 2 positions the MIT concept within the related scientific literature and argues on its importance. Section 3 then gives an overview on the structure of this thesis and examines its main contributions to the existing literature. Finally, Section 4 provides a brief summary of each of the essays.

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<sup>1</sup> This is a cumulative dissertation consisting of seven articles. These articles are listed and discussed in Sections 3 and 4 of this Introduction. Moreover, they are emphasized in bold in the references where we also provide the respective DOI numbers.

<sup>2</sup> Similarly, the title of David Landes’ address at the 1989 annual meeting of the American Economic Association was “Why Are We So Rich and They So Poor?” (see Landes, 1990).

<sup>3</sup> Lucas particularly referred to the question of why India’s growth was lacking Indonesia’s and Egypt’s. Ironically, even while Lucas was writing his article, India’s growth exceeded that of both countries (see Barro and Sala-i-Martin, 2004, p. xv). The average growth rates of GDP per capita for India, Indonesia, and Egypt between 1960 and 1980 amounted to 1.3, 3.4, and 3.3 percent, respectively, whereas between 1980 and 2000 they were 3.4, 2.9, and 2.5. This difference is even more pronounced for the period between 2000 and 2017 (5.7, 3.9, and 2.1 percent, respectively) (World Bank, 2018, own calculations).

## 2 Classification and significance of the MIT literature

The MIT literature can be positioned within the broader literature on economic growth, in particular the literature on income convergence. With respect to the convergence literature, it can be distinguished between theoretical models and empirical studies. Extensive overviews on the theoretical literature are provided by the books of Barro and Sala-i-Martin (2004) and Acemoglu (2009). Broadly speaking, it can be differentiated between the *convergence thesis* postulated by the neoclassical growth theory (in particular Solow, 1956, Swan, 1956 as well as Ramsey, 1928, Cass, 1965, and Koopmans, 1965) and the *divergence thesis* advocated by the endogenous growth literature (among others, the AK-model by Rebelo, 1991, the learning-by-doing model by Romer, 1986, the human capital model by Lucas, 1988, and R&D models by Romer, 1990 as well as Aghion and Howitt, 1992). The main empirical income convergence concepts are beta- and sigma-convergence as well as club convergence (see, e.g., the articles of Barro and Sala-i-Martin, 1991, Durlauf and Quah, 1999, Islam, 2003, and Durlauf et al., 2005).

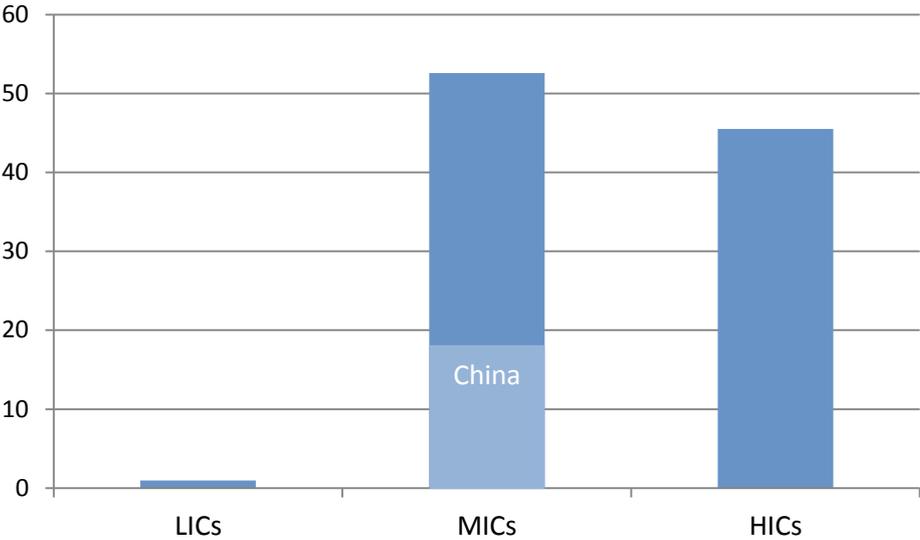
At first sight, it might seem that the MIT concept (particularly the relative approach) is nothing else than a restatement of the conditional/club convergence concept; the latter has already been discussed in a voluminous theoretical and empirical literature. However, in contrast to the convergence literature, the MIT concept refers especially to the middle-income countries (MICs) and tries to explain why a growth/convergence slowdown occurs particularly at this income range. To put it differently, in many ways the MIT concept can be regarded as an application of the convergence concept to a particular income group, the MICs. The MIT concept deals with the specific challenges and policy implications for this middle-income group, which is a topic that has not been the focus of the standard convergence literature although it seems to be of great importance: Today, many countries are confronted with the challenging middle-income transition, especially many East Asian and Latin American countries. Overall, more than five of the world's seven billion people live in MICs and this country group is home to more than 70% of the world's poor population.<sup>4</sup> Simultaneously, they are the major engines for global growth and constituted more than half of the global gross domestic product (GDP) in 2017 (see Figure 1). China – a potential future MIT candidate – alone produces 18% of the world GDP. Thus, a slowdown in the emerging market economies<sup>5</sup> will also have strong implications for the low-income and the high-income countries. Therefore, the danger of the MIT is of great relevance for the future welfare of many people.

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<sup>4</sup> World Bank (2018), own calculations. See also the “Middle-Income Countries” Section on the World Bank webpage (<https://www.worldbank.org/en/country/mic/overview>).

<sup>5</sup> Here and in the following, the term “emerging market economies” refers to “middle-income countries”.

**Figure 1.** Percentage share in world GDP (PPP) in 2017.



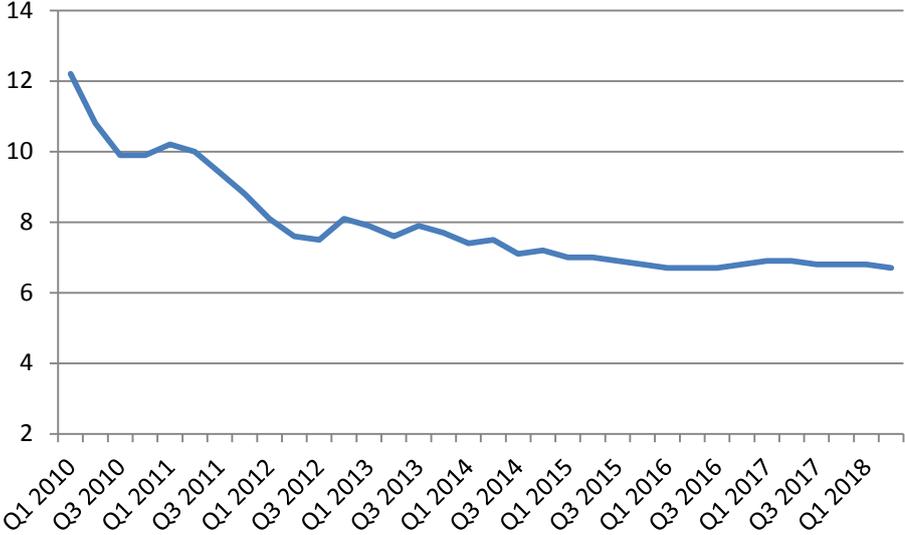
*Data Source:* GDP based on purchasing power parity (PPP) share of world total: World Economic Outlook April 2018 of the IMF, own calculations. *Notes:* LICs, MICs, and HICs denote low-income, middle-income and high-income countries, respectively (according to the current World Bank income classification). China belongs to the group of MICs.

Particularly since the beginning downturn of the Chinese economy, special attention has been paid to the question of whether China is also a potential MIT candidate (see e.g., Wagner, 2015).<sup>6</sup> In 2011, China’s growth rate started to decline and amounted to “only” 6.9% in 2017 according to official figures (see also Figure 2).<sup>7</sup> Besides the increasing attention in the scientific literature, the question of whether China is at risk of an MIT has also entered the political debate. For example, Li Keqiang mentioned it at the 12th National People's Congress in March 2016, and one year earlier, then-Finance Minister Lou Jiwei warned that China had a 50% chance of falling into an MIT (see Glawe and Wagner, 2017e). Even Xi Jinping used the term several times himself. In addition, development organizations such as the World Bank, the IMF as well as the Asian Development Bank have focused on the potential growth slowdown in China.

As already indicated above, China’s central role in the world economy (being the world’s leading exporter and second largest importer and accounting for the vast majority of FDI to Africa and South Asia) highlights the worldwide relevance and economic scope of a sustained growth slowdown.<sup>8</sup> However, also China’s unique economic development process makes it an interesting country to study.

<sup>6</sup> Meanwhile, there are more than 390 articles on EBSCOhost dealing with the MIT, more than 40 percent relating to China. Similarly, there are a total of 8570 research results on Google Scholar dealing with the MIT, 6870 mentioning China (see Google Scholar and EBSCOhost Database, accessed online 23.09.2018, search terms “middle-income trap” and respectively, “middle-income trap” and “China”).  
<sup>7</sup> Some observers have assessed growth in China as being even lower.  
<sup>8</sup> See WTO (2015).

**Figure 2.** GDP growth in China, Q1/2010-Q2/2018.



Data Source: NBS (2017).

**3 Structure of the thesis**

This thesis provides an in-depth analysis of the growth and economic development in emerging market economies with a special focus on the MIT concept and the concrete application to the Chinese economy. As already indicated above, it can be assigned to the economic growth and development literature. The main objectives of this thesis are (i) to assess empirically and theoretically why countries (particularly China) become trapped at the middle-income level and analyze the underlying mechanisms, (ii) to make MIT forecasts (particularly for the Chinese economy) and (iii) to suggest policy implications that help countries to successfully overcome the MIR. As a whole, this thesis analyzes the MIT from various standpoints by covering empirical and theoretical aspects. Overall, it consists of seven essays. A comprehensive overview on the MIT concept is provided in the first essay (Glawe and Wagner, 2016). The second essay (Glawe and Wagner, 2017a) then particularly analyzes the MIT situation for China by using the key findings elaborated in the literature survey. Both essays also extensively discuss the weaknesses of the MIT concept (in general and for assessing the MIT probability in China) and underline the need for a growth-theoretical foundation of the MIT. The third essay (Glawe and Wagner, 2017b) then proposes a (multi-sector) growth model of China’s economy that can explain a (potential) MIT in China. Essays four, five, and six (Glawe and Wagner, 2017c, 2017d, 2018a) then provide a detailed analysis of the role of the deep determinants, namely geography, institutions, culture, and integration, for the MIT probability and also for the economic development of the Chinese provinces. Thus, they offer an alternative to the proximate factors (which are the primary subject of the first three essays) for explaining an MIT. The final essay (Glawe and Wagner, 2018b) then elaborates the future challenges of MICs by analyzing the impact of the Fourth Industrial Revolution on the MIT mechanism and growth drivers of MICs.

The exclusive aspects of this thesis are discussed in more detail below (in Section 4). However, the main contributions to the academic literature are the following:

- It comprises the first comprehensive survey on the MIT concept that takes into account the empirical definitions, triggering factors, and theoretical foundations simultaneously.
- Moreover, it contains the first survey on the Chinese MIT situation and proposes the most comprehensive MIT scenario analysis for the Chinese economy by using a wide range of empirical MIT definitions and triggering factors of the general MIT literature as well as an extensive array of growth forecasts.
- It adds further arguments to the theoretical discussion of MITs by providing a multi-sector growth model for the Chinese economy that helps to explain a (potential) MIT in China.
- This thesis comprises the first empirical studies to analyze the role of the deep determinants (geography, institutions, culture, and integration) for the probability for a country to experience an MIT. In addition, it contains one of the first papers that investigate the role of the deep determinants in MICs at the sub-national level, particularly for China at the provincial level.
- It elaborates the main points of criticism of the MIT concept, being the first work that critically questions the empirical definitions and triggering factors with an in depth analysis (exemplified for the Chinese economy). Moreover, each essay points to interesting aspects for further research.
- It is the first work to analyze the impacts of artificial intelligence and digitalization on the MIT mechanism.

#### **4 Short summaries of the essays**

In the following, I will provide a brief summary of each of the seven essays, including their main contributions to the economic growth and development literature and in particular, the MIT literature.

The **first essay** entitled “*The Middle-Income Trap: Definitions, Theories and Countries Concerned – A Literature Survey*” (Glawe and Wagner, 2016) provides a literature survey on the MIT concept. In particular, the paper gives a detailed overview and critical analysis of the following aspects of the MIT literature: the empirical MIT definitions, countries in the MIT, empirical identified triggering factors (or, determinants) of the MIT, and theoretical explanations of the MIT.

In contrast to previous literature surveys (e.g., by Im and Rosenblatt, 2015; Kanchochat, 2014; and Gill and Kharas, 2015), we set the following emphasis: First, we discuss

how the definition differences across studies affect the composition of the group of MIT countries identified by the studies. Moreover, we not only elaborate the difference between the absolute and relative MIT definitions, but also differences within these two subgroups. Second, we discuss the theoretical foundations of the MIT, which have only been described superficially in the literature. Third, our survey provides an up-to-date review of the literature, that is, it includes recent MIT studies. Finally, the previous MIT literature lacks a comprehensive survey that takes into account both the different definition approaches (including the implications for the identified MIT countries) and the theoretical explanations.

The **second essay** entitled “*The People’s Republic of China in the Middle-Income Trap?*” (Glawe and Wagner, 2017a) analyzes under which conditions China could be caught in a middle-income trap by focusing on the empirical MIT definitions and the MIT triggering factors identified in the first essay. We not only survey the recent literature, but also make our own MIT forecasts and analyze under which conditions China could be caught in an MIT. Our application of the MIT definition to China’s economic development reveals that in most scenarios China enters the MIT only if the Chinese growth rate drops to the levels (3–4 % p.a.) predicted by the most pessimistic growth projections in the literature. Regarding the MIT triggering factors, our main findings can be summarized as follows: China performs quite well with respect to its export performance; further improvements with respect to human capital accumulation and education as well as a mitigation of the widening (rural-urban) income inequality seem to be adequate measures for preventing an MIT in China. The picture is less clear regarding productivity because TFP data vary widely across studies. Finally, we elaborate some key weaknesses of the MIT concept (exemplified for the Chinese economy) and point to the theoretical deficit of the MIT literature.

Consequently, the **third essay** entitled “*A Stylized Model of China’s Growth Since 1978*” (Glawe and Wagner, 2017b) seeks to make a theoretical contribution to the discussion of future growth in China. The paper is motivated by the following findings elaborated in the two previous essays: First, the MIT literature is afflicted with several conceptual problems: Very often, the choice of middle-income thresholds and the choice of the triggering factors appear to be arbitrary. Second, there is no one size fits all solution that works for every MIC. This is especially true for China which has a very unique economic model and history. In fact, the MIT should be understood as a path-dependent concept, that is, one has to take into account China’s previous growth strategy and the reforms that have already been implemented in order to derive implications for the future growth opportunities. Growth theory offers us the tools to analyze a possible MIT in China under these considerations. Third, there are only few mathematical MIT models (examples include Agénor and Canuto, 2015, as well as Dabús et al., 2016). In addition, there are only few growth models of China’s economy (Song et al., 2011, and Gong, 2016). In contrast to this literature, we focus on the entire reform period and we analyze the effects of the reforms in a multi-sector-framework. In particular, we develop a neoclassical multi-sector growth model (based on the modern multi-sector modeling literature and in particular on Laitner, 2000, Kongsamut et al., 2001, Ngai and Pissarides, 2007, and Acemoglu and Guerrieri, 2008) and discuss its predictions for future growth, the MIT probability and growth-generating policies in China. Our model implies that Chinese growth since

1978 was generated by a series of reforms that generated a series of transitory growth phases. Thus, China's growth rate may (further) slow down in the future unless further growth sources are activated. Among all the reforms, the third-phase reforms starting in 1992 (trade liberalization and nationwide implementation of FDI-enhancing policies) have the potential to create further growth if China succeeds in accumulating further capital via FDI and exploiting the technological progress embodied in FDI. Moreover, a natural sequel seems to be a reform of the service sector which will become by far the largest sector of the Chinese economy in the future. Thus, future factor productivity will depend on the productivity of the service sector.

While the first three essays have primarily focused on the proximate factors of the MIT (such as physical capital or TFP), the **fourth** and **fifth essays** entitled "*The Deep Determinants of the Middle-Income Trap*" (Glawe and Wagner, 2017c) and "*The Deep Determinants at More Subtle Stages of Development – The Example of the Middle-Income Trap Phenomenon*" (Glawe and Wagner 2017d) focus on the relationship between the deep determinants of economic growth and development and the MIT phenomenon. The fundamental, underlying factors of development (geography, institutions, culture, and integration) have been found to be decisive for the break out of stagnation and for explaining cross-country income differences by many empirical studies. However, so far, very little has been done to examine to which extent they are also crucial at more subtle stages of economic development. The two papers aim to close this gap by focusing on the phenomenon of the MIT. The fourth paper uses simple statistical hypothesis testing to examine whether the deep determinants have positive or negative impacts on the possibility of a country to experience a prolonged stay within the middle-income range. The fifth paper uses probit and IV probit models to test whether the results of the empirical studies conducted by Acemoglu et al. (2001, 2014), Rodrik et al. (2004), and Easterly and Levine (2016) also remain valid when analyzing the MIT. It is the first paper that analyzes the relationship between the deep determinants and the MIT, especially regarding the causal effect of institutional quality on the probability of experiencing a growth slowdown at the middle-income range. Our analysis reveals that while, in general, the deep determinants also seem to play an important role for the middle-income transition (and the question of whether a country falls into an MIT), some differences compared to the results of the standard literature become apparent.

The subsequent **sixth essay** entitled "*The Deep Determinants of Economic Development in China – A Provincial Perspective*" (Glawe and Wagner, 2018a) analyzes in how far the deep determinants and particularly institutional quality can explain differences in economic performance across provinces in China by using ordinary least squares (OLS) and two-stage least squares (2SLS) regression analysis. China is often regarded as an exception by having achieved miraculous growth for more than three decades despite relatively low institutional quality. Nonetheless, our key findings suggest that at the provincial level, institutional quality played in fact an important role for the economic success of a province in China, even more important than geographical factors and integration. However, when simultaneously examining the relationship between institutions, human capital, and provincial economic development, we find that human capital "trumps" everything else; however institutional quality has a highly significant indirect effect on provincial per capita income by improving human capital. Finally, we briefly discuss the implications for China's future growth strategy. In par-

ticular, we argue that in order to successfully exploit the growth potential of the inland provinces (and thus, to foster overall growth in China), the government should focus on improving human capital and institutional quality in the Western and Central provinces.

The **seventh** and last **essay** entitled “*The Middle-Income Trap 2.0: The Increasing Role of Human Capital in the Age of Automation and Implications for Developing Asia*” (Glawe and Wagner, 2018b) gives a first impression of the future of the MIT phenomenon. In particular, it modifies the concept of MIT against the background of the (future) challenges of automation and the Fourth Industrial Revolution (creating the concept of the “MIT 2.0”). In particular, we analyze the impacts of automation, artificial intelligence, and digitalization on the growth drivers of MICs and the MIT mechanism. We show that due to automation

- a) the initial growth push implied by an export-manufacturing growth strategy is reduced, implying that the MIT would occur at the lower end of the middle-income range.
- b) the necessary shift in the growth strategy is afflicted with higher requirements, particularly regarding human capital. This in turn, will lead to a higher persistence of the trap and it will become more difficult to break out of it.

Our findings suggest that improving human capital accumulation, particularly upgrading of skills needed with the rapid advance of automation (primarily cognitive and ICT skills), will be key success factors for overcoming the MIT 2.0. This implies that overcoming the “MIT 2.0” will be in general far more difficult than coping with today’s “traditional” MIT. Thus the current low-income and lower-middle-income countries will be confronted with higher challenges than the early industrializers and today’s upper-middle-income countries. In a next step, we elaborate the implications for developing/emerging Asia (including China) regarding their probability to experience an MIT on the basis of these modified challenges. In particular, we develop a “trap map” with a special focus on human capital as well as cognitive and ICT skills.

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**Appendix:** Curriculum Vitae.

**CURRICULUM VITAE – JANUARY 2019**

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2014-2016 Master of Science in Economics (with honors), University of Hagen  
2010-2014 Bachelor of Science in Economics, University of Hagen  
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Since 2016 Researcher at the University of Hagen  
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## PUBLICATIONS AND WORKING PAPERS

- Glawe, L. and Wagner, H. (2016): The Middle-Income Trap - Definitions, Theories and Countries Concerned: A Literature Survey. *Comparative Economic Studies* 58(4): 507-538. doi: <https://doi.org/10.1057/s41294-016-0014-0>.
- Glawe, L. and Wagner, H. (2017): The People's Republic of China in the Middle-Income Trap?, Asian Development Bank Institute (ADBI) Working Paper No. 749, forthcoming in: *China Economic Review* (2019) (under the title: China in the Middle-Income Trap). doi: <https://doi.org/10.1016/j.chieco.2019.01.003>.
- Glawe, L. and Wagner, H. (2017): A Stylized Model of China's Growth Since 1978. CEAMeS Discussion Paper No. 5. doi: [10.18445/20190123-162651-0](https://doi.org/10.18445/20190123-162651-0). Also published as SSRN Working Paper No. 2917433.
- Glawe, L. and Wagner, H. (2017): Gefangen in der Mitte. *Asia Bridge* (Special China), 2017, 4: X-XI.
- Glawe, L. and Wagner, H. (2017): China Caught in the Middle-Income Trap? VoxChina, available online at <http://www.voxchina.org/show-3-55.html>.
- Glawe, L. and Wagner, H. (2017) The Deep Determinants of the Middle-Income Trap. CEAMeS Discussion Paper No. 10. doi: [10.18445/20190124-102035-0](https://doi.org/10.18445/20190124-102035-0).
- Glawe, L. and Wagner, H. (2017) The Deep Determinants at More Subtle Stages of Development – The Example of the Middle-Income Trap Phenomenon. CEAMeS Discussion Paper No. 11. doi: [10.18445/20190124-103959-0](https://doi.org/10.18445/20190124-103959-0).
- Glawe, L. and Wagner, H. (2018) The Deep Determinants of Economic Development in China – A Provincial Perspective. CEAMeS Discussion Paper No. 12. doi: [10.18445/20190124-112938-0](https://doi.org/10.18445/20190124-112938-0).
- Glawe, L. and Wagner, H. (2018) The Middle-Income Trap 2.0: The Increasing Role of Human Capital in The Age of Automation And Implications For Developing Asia. CEAMeS Discussion Paper No. 15. doi: [10.18445/20190124-114606-0](https://doi.org/10.18445/20190124-114606-0).

## CONFERENCES

- GDRI IDE (Groupe de recherche international en économie internationale du développement) Conference "International Development Economics Colloque 2018", Clermont-Ferrand, France, 15th - 16th November 2018.
- CEC Conference "40th Anniversary of China's Reform and Opening Up: Institutional Change and Reconfigurations of China's Political Economy", Duisburg, Germany, 10th - 12th October 2018.
- Dynamics, Economic Growth and International Trade (DEGIT XXIII) Conference, Moscow, Russia, 6th-7th September 2018.
- Workshop on "China's Development Experience and Enlightenment", Chongqing, China, 25th-26th August 2018.
- Asian Meeting of the Econometric Society, Sogang University, Seoul, South Korea, 21st-23rd June 2018.
- China Meeting of the Econometric Society, Fudan University, Shanghai, China, 15th-17th June 2018.
- 25th Conference of the Eurasia Business and Economics Society (EBES), Berlin, Germany, 23rd-25th May 2018.
- Seminar "China and the Middle-Income Trap", International Monetary Fund (IMF), Washington, DC, United States, 8th-10th January 2018.
- 2018 Annual Meeting of the Allied Social Science Association (ASSA) and the American Economic Association (AEA), Philadelphia, PA, United States, 5th-7th January 2018.
- 2nd Center for East Asia Macroeconomic Studies (CEAMeS) Workshop on "East Asia Macroeconomic Studies", Xiamen, China, 9th-11th May 2018.
- The Third International Forum on the 'New Silk Road' and Sino-European Cooperation", Conference in Duisburg, Germany, 8th-9th November 2017.
- 11th International Conference on the Chinese Economy: "The 'new normal growth' and the future of the China's economy", Conference in Clermont Ferrand, France, 19th-20th October 2017.
- Second World Congress of Comparative Economics "1917-2017: Revolution and Evolution in Economic Development", Conference in St. Petersburg, Russia, 15th-17th June 2017.

- 1st CEAMeS (Center for East Asia Macroeconomic Studies) Workshop on “Macroeconomic Development and Trade in East Asia”, Hagen, Germany, 11th-13th May 2017.
- Asian Development Bank Institute (ADBI) and Chinese Academy of Social Science (CASS) Conference “The Middle Income Trap in Asia”, Kobe, Japan, 12th-13th December 2016.

## **SUMMER SCHOOLS AND SUPPLEMENTARY COURSES**

- PhD Supplementary Course “Economic Growth” by David Weil, May 2018, Institut für Weltwirtschaft (IfW), Kiel, Germany.

## **HONORS**

- Invitation to the 6th Lindau Nobel Laureate Meeting on Economic Sciences, Lindau, Germany, 22th-26th August 2017.

## **RESEARCH INTERESTS**

- growth theory
- middle-income trap
- structural change
- economic development
- income inequality
- East Asian economics

## **ADDITIONAL SKILLS**

- **Software** Stata, R, Microsoft Office
- **Languages** German, English, French, Chinese

## Eidesstattliche Versicherung

„Hiermit versichere ich an Eides statt, dass ich die Dissertation selbstständig und ohne Inanspruchnahme fremder Hilfe angefertigt habe. Ich habe dabei nur die angegebenen Quellen und Hilfsmittel verwendet und die aus diesen wörtlich oder inhaltlich entnommenen Stellen als solche kenntlich gemacht. Die Hilfe einer Promotionsberaterin/eines Promotionsberaters habe ich nicht in Anspruch genommen. Die Arbeit hat in gleicher oder ähnlicher Form noch keiner anderen Prüfungsbehörde vorgelegen. Ich erkläre mich damit einverstanden, dass die Arbeit mit Hilfe eines Plagiatserkennungsdienstes auf enthaltene Plagiate überprüft wird.“

Gelsenkirchen, den 10.10.2018

  
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