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THE NEW FRONTIERS OF THE WORLD AUTOMOTIVE INDUSTRY TECHNOLOGIES APPLICATIONS INNOVATIONS MARKETS

24th International
Colloquium of
Gerpisa

<http://gerpisa.org>



THE “NEW FRONTIERS” OF THE WORLD AUTOMOTIVE INDUSTRY: MARKETS, TECHNOLOGIES, APPLICATIONS AND INNOVATIONS

Call for papers for the 24th International Colloquium of Gerpisa

1-3 June, 2016

**ITESM-Puebla (Technologico de Monterrey, campus Puebla)
Puebla, MEXICO**

Deadline for sending the proposals: 29 February, 2016 (All day)

Deadline for submitting the papers: 15 May, 2016 (All day)

Organisation committee

Lourdes Alvarez, Facultad de Contaduria y Administracion UNAM

Vallejo Bertha, Tilburg University, CentER Development Research Institute (IVO) - Tilburg University

Jorge Carrillo, El Colegio de la Frontera Norte

Alex Covarrubias, El Colegio de Sonora

Géry Deffontaines, GERPISA

Tommaso Pardi, CNRS-IDHES, GIS-Gerpisa

Ludger Pries, Ruhr-Universität Bochum & Cátedra Humboldt, El Colegio de Mexico

Raul Ruan, Instituto Tecnológico de Monterrey, Campus Puebla

The sixth international programme of Gerpisa has put at the forefront of our research agenda the fast changing geography of the automotive industry. The location of key markets, assembly and production, as well as core automotive activities, such as R&D and design, are rapidly shifting. Borders are moving not only between regions but also within the value chain. As a result of this process, synergies between different regions, and between traditional and new players in the industry become central while new opportunities and risks arise at the frontiers of this new complex automotive world.

As part of the new GERPISA International Research programme that is currently being developed and to prepare the opening of the GERPISA’s 24th International Colloquium that will take place in Puebla, Mexico, we would like to invite social science researchers with an interest in the automotive industry to reflect upon the notion of “new frontiers” in the global automotive industry.

These can be understood literally as new emerging markets and industries, but also as new technologies, new innovation fields, new applications and regulations. Electric and autonomous vehicles, digital cars and big data, factories of the future, car sharing and car pooling... who are the pioneers involved in shaping these new territories of production, consumption and innovation? What are the transformations that they are triggering and pushing forward in all these fields and dimensions? Are we dealing with passing fashions or substantial and cumulative changes? What are their implications for the current trends and

balances in the local, regional and global automotive systems and industries? And how will these transformations affect work and employment, beyond and within these shifting frontiers?

We are calling for empirical and/or conceptual studies focusing on these as well as on other questions raised by these major transformations in the global automotive industry and, more generally, in the field of transportation and mobility, which we detail below in five major themes of research. We also draw your attention to the special issue of the international journal IJATM that will be based on a selection of the best papers presented during the colloquium, including the winner of the young author's prize.

1. Embedding the automobile in societal contexts: new services, new uses, new integrated mobility systems, new business models (Bruce Belzowski, Bernard Jullien, Bertha Vallejo)
2. New technologies: sustainable mobility or new brave world (Giuseppe Giulio Calabrese, Yveline Lecler)
3. Production models and strategies, new locations and restructuring of value chains: between incremental and disruptive innovation (Lourdes Alvarez, Holger Bungsche, Tommaso Pardi, Hua Wang, Vincent Frigant, Thomas Klier)
4. Employment and labour relations: between segmentation and convergence (Antjie Blöcker, Holger Bungsche, Jorge Carrillo-Viveros, Martin Krzywdzinski, Tommaso Pardi)
5. Public policies – national and regional clusters: between path dependency/inertia and structural change (Boleslaw Domanski, Bruno Jetin, Sigfrido Ramirez)

IJATM special number

The International Journal of Automotive Technology and Management (IJATM) published by Inderscience publishes each year a special issue based on a selection of the most relevant papers presented during the GERPISA yearly colloquium. One or two papers from young authors will also be published in this special issue. An evaluation committee, composed of members of the GERPISA's international steering committee, will assess the papers during the colloquium (young authors and others).

The criteria of the assessment are based on the relevance of the topic inquired, the presentation and the accuracy of the results, the quality of the methodological work, and the review of the literature. A variety of work in the field of social sciences (history, management, economics, sociology, geography, political science, etc.) dealing with automobile industry is welcome.

After the decision of the GERPISA's steering committee, the selected papers will be refereed through a double-blind process, and then published in a special issue of the International Journal of Automotive Technology and Management. We are looking forward to reading your papers and attending your presentations.

Gerpisa Young Author Prize

The Young Author's Prize of GERPISA, consisting of the publication of the winning paper in a special issue of IJATM and a 1500 € reward, aims at recognizing the work of young researchers on topics related to the automobile industry, encouraging them to develop their enquiries on automobile industry.

Requirements to submit a paper proposal for the young author's prize:

1. Master, Ph.D. students, post-doc, etc. (no full-time associate professor, professor or researcher) needs to be less than 37 years old (papers co-authored with a senior researcher will not be assessed);
2. Paper based on the analysis (whether theoretical, methodological, or empirical) of the automobile industry (topics have to cover one of the five themes of the colloquium);
3. Presentation of the paper during the 24th international colloquium, Puebla, 1st of June – 2nd of June 2016;
4. Submission online (for one of the 5 above-mentioned themes, specifying that the papers are for the prize), and email (name, date of birth, nationality, status, University, topic, abstract) to Giuseppe Calabrese (g.calabrese@ceris.cnr.it), and Tommaso Pardi (tpardi@gerpisa.ens-cachan.fr) before the 28th of February 2016.

1. Embedding the automobile in societal contexts: new services, new applications, new integrated mobility systems, new business models (Bruce Belzowski, Bernard Jullien, Bertha Vallejo)

New Mobility talks about transforming transport systems into IT-based systems that allow people in the megacities (and their suburbs) of the future to seamlessly travel to and from destinations via a variety of modes (planes, trains, boats, cars, car-sharing, taxis/Uber, bicycles, motorcycles, busses, etc.). Previous GERPISA conferences examined some of the new mobility strategies of non-automotive companies as well as some of the early entries of automotive firms into this new space. But we have not discussed the details of how “disruptive” these new entries can be to the current automotive paradigm.

Historically, auto manufacturers do not have a good track record for going outside designing, developing, and manufacturing vehicles, seeking profits in downstream activities such as aftermarket, service and repair, and rentals. Also, going outside the auto industry to provide home loans contributed to the GM and Chrysler bankruptcies. Over the past five years, manufacturers have investigated the role(s) they may play in the context of New Mobility and when this new paradigm will begin affecting the auto industry. Can they really become “mobility providers?”

For this theme, we seek papers discussing the effects New Mobility will have on the auto industry, how the industry is responding/will respond to the challenge, where does the industry see potential profits and losses, what will be the business model(s) for auto manufacturers, what new services can it provide, what will be the role governments and regulations play in how New Mobility develops and affects the auto industry, and how will consumers/drivers evolve their living/driving/car buying habits to adapt to a New Mobility paradigm. Also, what would it take to turn an automotive company into a “mobility provider?”

We also welcome papers that will look at the development of new integrated mobility systems from the perspective of other non automotive players, such as service providers, IT companies, insurers, etc. If new mobility patterns entail regime change, papers are welcome on empirical cases and analysis of the services implemented in different countries or cities in relation to: strategies of carmakers but also of other firms involved: car rental or carsharing companies, parking companies, public/collective transport companies (urban train/metro, buses), as an intermodal shift is at stake in most cities to avoid traffic jams but also CO₂

emissions. The business model related to all these new mobility services is still not clear and of course more analyses are necessary.

2. New technologies: sustainable mobility or new brave world (Giuseppe Giulio Calabrese, Yveline Lecler)

New technologies and new forms of mobility are strictly redefining the frontiers in the automotive industry. The last GERPISA conferences pointed out the interconnection between the technological trajectories, the role of incumbents and newcomers in the industry, the state and private actors in the transport system.

The “new” automotive industry requires many innovations: product (raw materials, architecture definition...), service (car-sharing, connected cars...), business models and marketing (battery rental, after-sale activities...), policy (aids, regulations...). Papers on the respective role of market, which might be covered by each technology, are welcome: electric vehicles (full size and micro), full and plug-in hybrid vehicles, fuel cell vehicles, but also LPG, CNG and biofuel vehicles. A major hurdle regards the electric vehicles massive diffusion.

We also need to describe the role and impact of public (environmental or transport) politics in supporting the new powertrains and forms of mobility and in shaping the integration with old technology. For example tightening regulations and technology innovations are driving automakers to switch to 48-volt system, but this solution has implications for the whole automotive industry.

Some topics have only been tangentially addressed in the previous GERPISA conferences: The national legal framework, that is regulations and laws which may favour or disadvantage the introduction of new mobility services in cities: depending on the legal framework, services which can be provided will of course differ leading to different strategies and business models. It might be useful to suggest papers taking a demand approach to the market of new powertrains, vehicles, and new mobility services, including customers/citizens’ needs and mobility patterns but also their acceptance to changing their behaviour, and the incentives that cities and/or companies implement to promote new mobility services.

The issue of charging infrastructure that might be linked to public and private investments (public policies, but also carmakers investments or even commercial facilities investment to attract EVs owners, to generate an eco-image). It might also be related to energy questions depending on charging resources which are focussed on.

Autonomous and more connected cars will be launched into the market. Which is the real state of the art in terms of cybersecurity? Which is their impact on mobility tendencies?

New technologies to improve fuel efficiency do not regard only powertrains. The reduction of emission can be reached also by downsizing and lightweighting. These involve new component design, new material mix and innovation in manufacturing process. Are these key trends sustainable and affordable?

3. Production models and strategies, new locations and restructuring of value chains: between incremental and disruptive innovation (Holger Bungsche, Tommaso Pardi, Hua Wang, Jorge Carrillo-Viveros, Vincent Frigant, Thomas Klier)

The interlinked processes of structuring new industries in emerging countries and restructuring the old core pushes carmakers and suppliers to a reorganization of their engineering and productive activities: value and innovation emerge from the synergies between these two interlinked processes. If the decentralization of R&D and production activities can be seen as a new frontier where new dedicated products and technologies for emerging markets are taking form, the task of preserving and diffusing organizational learning as well as optimising such new organisations globally represents a challenge for all the players.

Papers that focus on the reorganisation of centralized R&D, the management and organisation of decentralized units, the upgrading of R&D subsidiaries and the analysis of international synergies between centralized and decentralized engineering processes and units will be particularly welcome.

Due to the introduction of new technologies in powertrains, the leap towards digital and autonomous cars, and the development of new services and applications, carmakers and suppliers are forced to enter unknown territories where they have to learn how to compete and cooperate with many other important players. In order to acquire/build these new competencies and capacities, the strategies developed by carmakers and suppliers vary significantly: from full in-house integration to complete acquisition and/or outsourcing. We welcome papers that characterize these strategies, and detail their implication in terms of products and organization.

These transformations also modify the frontier between carmakers and suppliers and the division of labour between the two: for instance, in many of the new innovation fields global suppliers, including new suppliers of strategic content, such as IT software and mapping technologies, appear to have taken the lead. Papers discussing the intersection of traditional and emerging aspects of core competencies and their position in the value chain as well as the strategic and political implications of these transformations are welcome.

4. Employment and labour relations: between segmentation and convergence (Antjie Blöcker, Holger Bungsche, Martin Krzywdzinski, Tommaso Pardi)

Are the employment conditions and labour standards in the automotive sector converging? The globalization of automotive industries, the diffusion of best practices and production and quality standards, the upgrading of subsidiaries in emerging markets, and the growing role of innovation activities worldwide should imply at least some forms of convergence. However, significant gaps in employment and working conditions, in wages and benefits, and in workers' interest representation between spaces of production in mature and emerging countries remain the norm, and they are also systematically exploited by the whipsawing practices of firms to reduce costs and increase efficiency. We need a better understanding of how these contradictory dynamics play together, of the different factors that affect their contrasted outcomes, and of the political processes involved in the transformations of work and employment relationships in mature and emerging countries.

We welcome in particular papers detailing and analyzing the outcomes of the restructuring processes triggered by the crisis in mature countries, as well as papers that cast light on the structuring processes of new industries in emerging markets. The focus can be on automobile companies and on the evolution of their specific HR policies, on trade unions' and national or supranational governments' strategies and policies in relation to the evolution of employment and work in the sector during and after the crisis, or on recent negotiations and work contracts' changes at local, regional and national level.

As in the previous international colloquium, we would like to keep a special focus on the transformation of work and employment in R&D activities. We seek papers that track new trends such as the development of outsourcing of R&D work, the increasing internal and external cooperation (and competition) between R&D centers and subsidiaries worldwide, and the growing standardization and/or "industrialization" of work tasks and activities.

The introduction of new technologies at all stages of R&D and production, the growing tertiarization of the sector as well as the ongoing transformation of carmakers into providers of mobility services also imply important transformations in the structure of employment and work worldwide. We are interested in papers that analyze how these transformations impact work and employment in traditional players (OEMs and suppliers), but also in papers that focus on the employment relations of the new players within and outside the industry. A particular interest will be given here to papers that explore the wide implications in terms of work and employment of the growing role of "share economy's" players, such as BlaBlaCar, Lyft, Uber, in the provision of automobile services.

- The future of work in the automotive sector (Tommaso Pardi, Jorge Carrillo)

This year Gerpisa will start a three year cooperation with the International Labour Organization to explore the transformations and future of work in the automotive sector and the conditions that will allow for the progress of social justice in line with the ILO Century Project (<http://www.ilo.org/century/lang--en/index.htm>). This cooperation will entail the production of a report on the future of work in the automotive sector, as well as other collective publications of selected papers. Under this sub-stream we seek papers that will have a focus on this and related topics, such as the development and preservation of decent jobs in the global automotive value-chain, and how the current transformations of the organization of work and production and of the governance of work affect these outcomes at regional, national and firms' levels.

5. Public policies – national and regional clusters: between path dependency/inertia and structural change (Boleslaw Domanski, Bruno Jetin, Sigfrido Ramirez)

The state is again back in the heart of the restructuring of the world automobile industry. Together with their pro-active role in the rise of the BRICS, the home states of the automobile producers of the Triade have elaborated public policies at various levels (local, national, international) to support the survival of their automobile sectors throughout the crisis and upgrade the place of their industries in the global value chains.

These policies include a rethinking of the concept of industrial policy going further from a mere financing of R&D to encourage a new innovation policy through the construction of competitiveness clusters with inter-sectoral interactions to systematically generate

innovations. Such policies, that were most necessary, were accompanied with an increase of regulatory policies for safety, reduction of emissions and fuel economy. A subsequent convergence in more stringent regulations might lead to compatible standards as the new generation of trade agreements (Transatlantic, Transpacific Agreements, etc) clearly conceive for some of them the end of different regulations as one of the net gains beyond tariff-reduction. Therefore, we need to know more about how public regulations and trade agreements are elaborated, and in which way they might be affecting the technological choices made by actors of the industry and its impact in terms of regional development, jobs, and economic gains and losses in local, regional and national economies.

We also need to know more about the various Nation States' interests and policies. Not all countries have the same interests in adopting common rules, regulations and standards. Some countries are resisting the trend of some trade agreements' clauses such as the right given to multinational firms to sue governments when they think a new regulation is damaging their interests. Public policy in support of a country's automobile industry is getting more difficult to conceive and implement due to this nexus of complex and possibly contradictory constraints.

We also seek papers that focus on the policies that regulate emissions and fuel economy. What is their impact on technological change? How are they negotiated (by whom and in which arena), implemented (timeframes and degree of reversibility) and applied (tests and controls)?

One or more sessions of the colloquium will be dedicated to the issue of the regionalization of the Asian automotive industries and markets, which is also the subject of a forthcoming special issue of IJATM. In order to allow comparative discussion, authors are invited to submit their proposals under this theme, even though they deal with issues that might also fit other themes, and to mention in their abstracts "IJATM special issue on the regionalisation of the Asian automotive industries and markets."