Christian Homburg

Gender Gap in **Inventive Professions** 

Karin Hoisl

Regulatory Requirements Jeopardize European Banks

Sascha Steffen



## SELLING INNOVATIONS SUCCESSFULLY IN DIFFERENT CULTURES

How to motivate sales representatives in a global context

Guiding a sales force for innovation selling requires customized policies targeted to different cultures. For better innovation-sales results, managers should employ various motivation methods and tailor them to different regions.

Commercialization of innovations is a major success factor for firms but also represents a strong managerial challenge. Marketing experts Sebastian Hohenberg and Christian Homburg want sales managers to make the right strategic decisions. Together they published a study in the Journal of Marketing, exploring how to motivate a sales force for innovation selling in different cultures with various financial and non-financial steering instruments. The work constitutes one of the broadest and most internationally diverse investigations in sales research covering sales representatives (sales reps) from 38 countries on four continents.

## Meshing sales force steering across countries will not lead to optimal sales results

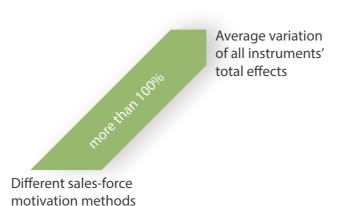
The publication of Hohenberg and Homburg emphasizes two major issues sales managers should consider when they set up a strategy to guide their sales force to sell innovative products. First, innovation selling differs strongly from the commercialization of established products because innovations are often complex and difficult for sales reps to understand. Second, the design of sales force steering instruments should consider sales reps' national culture. The study's findings demonstrate that the reps' cultural background strongly affects the effectiveness of various steering instruments. Aligning incentive schemes for sales forces across countries will therefore not lead to optimal motivation and sales results.

"Motivating sales representatives for innovation selling is particularly challenging", explains Sebastian Hohenberg, "because established steering instruments can have varying effects in the innovation context. For instance, evidence indicates that close guidance with regard to innovation commercialization fosters sales reps' motivation. Reps usually consider these directions as helpful advice. However, in the context of established products, sales reps inter-

pret such close guidance as surveillance, resulting in diminished motivation." Managers should therefore set up different motivation strategies for sales reps of innovative products.

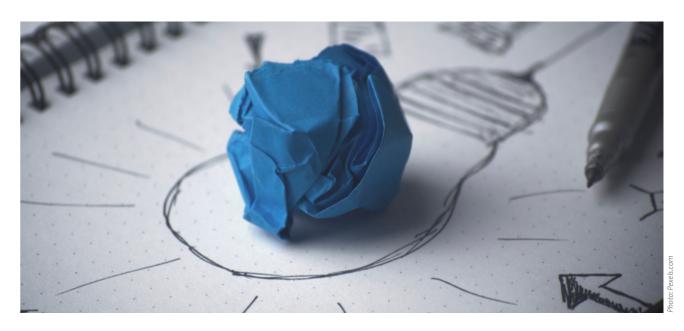
To obtain the insights stated above, the researchers collected data from a global chemical supplier. They invited 614 sales reps offering specialty chemical solutions to their customers to take part in their study, based on two surveys with response rates of 77%, respectively, 66%.

Hohenberg and Homburg set up a conceptual framework focusing on innovation performance in terms of financial metrics. They develop five hypotheses regarding the effects of four typical steering instruments on sales reps with different cultural imprints. The researchers examine variable compensation for sales results, supervisor appreciation for sales results, the extent to which sales reps receive training and information regarding innovation selling from their organization and the extent to which sales reps receive support for innovation selling from their direct supervisor. They use four of the widely-used "Hofstede Dimensions" to conceptualize sales reps' national culture (i.e., power distance, individualism, uncertainty avoidance, and long-term orientation).



## Managers should consider the sales rep's cultural background

The results of the hypothesis tests emphasize the importance of adapting strategies for motivating sales reps to cultural characteristics. To motivate innovation selling by sales reps from cultures with high power distance (e.g., Brazil, China, India), Hohenberg and Homburg recommend that managers



focus on steering measures that involve close interaction with the direct supervisor. In contrast, for sales reps from individualistic cultures (e.g., Netherlands, United Kingdom, United States), they recommend a focus on steering measures that reward or foster individual attainments, such as education for innovation selling or variable compensation for innovation-sales results. For sales reps from cultures with high long-term orientation (e.g., Slovakia, South Korea, Taiwan) as well as for sales reps from uncertainty-avoidant cultures (e.g., Belgium, Portu-

The study's findings demonstrate the power of incentives tailored to different nationalities. For example, the total effect of variable compensation for innovation-sales results on financial innovation performance is more that 350 percent higher in highly individualistic (versus less individualistic) cultures. Likewise,

gal, Romania), they advise focusing on supervisor

appreciation for better innovation-sales results.

using supervisor appreciation for innovation-sales in cultures with high power distance performance increases the financial innovation performance by more than 300 percent compared to cultures with less power distance. Furthermore, results show that the total effect of education for innovation selling is about 90 percent lower for cultures with high long-term orientation compared to low long-term orientation. Overall, the average variation of all instruments' total effects across high versus low values for each cultural dimension is greater than 100 percent. These findings lead to the advice to focus on the most appropriate steering instruments for each culture rather than attempting to standardize the firm's approach to steering across all regions.

Hohenberg, Sebastian and Homburg, Christian, Motivating sales reps for innovation selling in different cultures, Journal of Marketing, 80.2, 2016.



# ABOUT CHRISTIAN HOMBURG

Christian Homburg is director of the Institute for Market-Oriented Management (IMU) at the University of Mannheim. His special subjects are sales management, customer relationship management, and market-oriented management. Professor Homburg is member of the editorial boards of six scientific journals in the US and Germany. Furthermore, he operates as the first German area editor for the Journal of Marketing.

homburg@bwl.uni-mannheim.de

1

### **GENDER GAP IN INVENTIVE PROFESSIONS**

Female creative workers earn less than their male peers

Compensation in knowledge-intensive jobs is far from equal. Significant gender-based income gaps exist in research and development (R&D), where output can be objectively assessed through patents.

Research on gender wage gaps has a long and continuing tradition. Female full-time workers in the US earn only 77 percent compared to male full-time workers and in the European Union, gender wage gaps are about 16.0-17.5 percent. A recent study by Mannheim's innovation professor Karin Hoisl and her research fellow Myriam Mariani from Bocconi University examines gender wage and job performance gaps among highly skilled, creative workers, namely, "inventors," whose activities lead to patented inventions.

Inventors are ideally suited for the study's research interest. In their knowledge-intensive profession, skills and education – or human capital more generally - are the key assets, which should constitute the main drivers of income. "Empirical evidence confirms that differences in remuneration are tied to differences in individual performance", explains Karin Hoisl. "Thus, when taking objective factors into account, there is no reason gender should have any explanatory power for inventors' compensation."

#### Inventive jobs show a gender income gap of 12.6 percent

The analysis of Hoisl and Mariani relies on data collected through a large-scale survey of 9,692 inventors from 20 European countries, Israel, the United States, and Japan, between 2009 and 2011. It shows a gender-based income gap of 12.6 percent in inventive jobs, even after accounting for multiple factors, including education, working hours, past productivity, experience, selection into specific work roles and tasks, and individual preferences or motivations to invent. Parenthood negatively influences Share of male (96%) and female (4%) inventors



inventors' pay, but does not affect women exclusively. Inventors, both male and female, with children earn up to about 15 percent less compared to their childless peers.

The gender income gap does not reflect invention quality: Female inventors perform as well as men in terms of producing high-quality patents, using the number of forward patent citations, the inventive step and the number of countries with patent protection for the same invention as quality indicators. This result is surprising, because in the context of R&D workers, where inventive output is observable, wages should mirror differences in inventive performance. Instead, the results show that female inventors, though similar to men in terms of productivity, are paid less than their male counterparts. Interestingly, the share of female inventors – persons listed on at least one European patent application between 2003 and 2005 – is only 4 percent which points to a clear inefficiency. If talent is distributed equally between the sexes, there is an overreliance on men's and an underexploitation of women's potential.



#### Firms and policy makers must create more equality a potentially negative impact of having children,

The results of the study have powerful implications for companies. The study stresses the importance of women as highly skilled but so far largely underutilized human capital and demonstrates the existence of potentially unfair income differences that may incite inventors to select out of the profession or to underperform in their job. Secondly, the findings are important for policy makers. They provide empirical evidence that women are underrepresented among inventors and those who succeed earn less than their male peers. Women may anticipate nagement Science, 2016.

causing them to refrain from choosing careers in R&D. Therefore, targeted actions are required, e.g., through investments in affordable, high-quality childcare to help women maintain continuous work histories or legislation that mandates pay transparency. Karin Hoisl emphasizes: "Government action is required to create mechanisms for ensuring equal wages for equally performing or skilled employees."

Hoisl, Karin and Mariani, Myriam, It's a man's job - Income and the gender gap in industrial research, Ma-



## **ABOUT KARIN HOISL**

Karin Hoisl is the Professor of Organization and Innovation at the University of Mannheim. She has held this position since November 2015. She also has a part-time professorship at Copenhagen Business School. Between February and October 2015, she held a Minerva Fast Track Position at the Max Planck Institute for Innovation and Competition (5-year stipend for a research position). Between January 2011 and February 2015, she was Hans-Sauer-Foundation Junior Professor of "Invention Processes and Intellectual Property" at Ludwig-Maximilians-University Munich (LMU).

hoisl@bwl.uni-mannheim.de

## **CURRENT REGULATORY CAPITAL REQUIREMENTS JEOPARDIZE EUROPEAN BANKS**

Why sovereign debt should not be treated as "zero risk"

large subsidy by not requiring them to hold any capital against their exposure to EU members' sovereign debt risk. Governments provide this subsidy at taxpayers' expense and the authors estimate it to be Korte, Goethe University Frankfurt, he quantifies worth about 750 billion Euros.

In December 2016, Italy's government approved a an indirect subsidy of governments to the banks, capital injection for the world's oldest bank, Monte dei Paschi (MDP). The funds needed to rescue the bank will come from a 20 Billion Euro bank bailout package, applied to help MDP as well as other fragile Italian banks. The origin and likely costs to taxpayers of such bank rescues are the motivating questions of a recent study by Sascha Steffen, Professor of Financial Markets at the University of Mannheim Business School.

One source of future bank failures comes directly from bank regulation within the Eurozone, where current regulatory capital requirements rate exposures of European banks to sovereign debt as riskfree. European Banks are not required to hold any capital against bonds issued by EU member states. "These regulations cause severe distortions", reckons Steffen. He warns: "If sovereign risk materializes, banks may experience a substantial capital shortfall. Governments, ultimately taxpayers, may have to provide failing banks with large capital injections because of inadequate regulation."

In general, the capital requirements of the Basel Regulations – a global, voluntary regulatory framework on bank capital adequacy, stress testing, and market liquidity risk – require banks to hold capital for all asset classes. Capital requirements are based either on a given regulatory risk weight or banks' own models of default risk. In either case, the key idea of the Basel Regulations is to match capital requirements with objective assessments of the risks of banks' balance sheets. However, this idea has not been followed in the Capital Requirements Directive (CRD) of the European Union. Sovereign debt receives a risk weight of zero. Sovereign debt

risks are not adequately reflected in banks' capital. Sascha Steffen has conducted an award-win-EU member states provide European banks with a ning study to assess the impact of these zero risk weights. Together with his fellow researchers, Karolin Kirschenmann from Mannheim's Center for European Economic Research (ZEW) and Josef the extent of banks' undercapitalization. The researchers explain that zero risk weights provide which they call a "sovereign subsidy." Using data on sovereign debt exposures recently published by the European Banking Authority (EBA), they describe the build-up of this subsidy over the period from March 2010 to June 2013 for domestic as well as cross-country exposures.

#### Some banks have sovereign exposures exceeding their regulatory funds 15 to 20 times

The dimension of undercapitalization is staggering: The sovereign exposure of the 54 largest European banks has been about 1.5 to 2 trillion Euro over the last four years. The result is not just significant in absolute Euro amounts, but also compared to banks' core capital. On average, sovereign bond exposures account for more than 200 percent of banks' core ("tier 1") capital. Some banks even have sovereign exposures exceeding their regulatory funds 15 to 20 times.



Average banks' core capital



Average banks' souvereign bond exposures



#### Taxpayers provide European banks with a subsidy worth about 750 billion Euros

With their study, Steffen and his colleagues propose a new measure to calculate adequate risk weights for each sovereign debt exposure. Their methodology includes the credit rating of a country and the corresponding probability of default, amongst other factors. Based on their calculations, the "sovereign subsidy" amounts to approximately 750 billion Euro.

The study reveals another hazard of zero-risk weights: a spillover of risks within the Eurozone. EU banks could accumulate excessive leverage by investing in risky sovereign debt. If sovereign risk increases, banks have not accumulated a capital buffer for their sovereign debt exposure. Sovereigns therefore extend an (implicit) guarantee to provide capital backstops for their domestic banking sector. Professor Steffen warns of the implicit bailout costs of the European banking sector and urgently recommends adequate public safeguard for banks with larger non-domestic sovereign exposure: "As there is a large contingent capital shortage due to the zero risk weight, replacing it for a more risk-adequate treatment of sovereign exposures would most likely require an additional capitalization effort for banks and additional sovereign backstops."

Kirschenmann, Karolin, Korte, Josef and Steffen, Sascha, The Zero Risk Fallacy - Banks' Sovereign Exposure and Sovereign Risk Spillovers, October 9, 2016.



# **ABOUT**

Sascha Steffen received his doctoral degree from the Goethe University Frankfurt. He was visiting scholar at the Stern School of Business at New York University and the European School of Management and Technology (ESMT) in Berlin, where he was the Karl-Heinz Kipp professor. He has been a professor at the University of Mannheim, Business School since 2016. His primary research interests are banking regulation, financial market stability, credit risk, and financial intermediation.

steffen@bwl.uni-mannheim.de



### **IMPRINT**

Publisher:
University of Mannheim
Business School
L 5, 5
68131 Mannheim
www.bwl.uni-mannheim.de

Responsible: Professor Ernst Maug, Ph. D.

Concept/Editorial: Dr. Liane Weitert

Design: Merve Afacan







