Author’s response to reviews

Title: The Impact of Economic and Noneconomic Hospital-Physician Exchange on Customer-Oriented Behavior of Physicians and the Moderating Effects of Professional and Organizational Identification: A Cross-sectional Study.

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Version: 3 Date: 7 January 2015

Author’s response to reviews:

Dear editor,

Thank you for providing us the opportunity to revise our paper a second time and address the final concerns.

We are pleased that the reviewers find we tackled the majority of the comments and issues of the first round of revision.

We like to thank the reviewers and editor for their constructive feedback on our article. We agree that by addressing the remaining issues we further improved our manuscript. We addressed all concerns and suggestions made by the reviewers with care. We sincerely believe that our paper has indeed improved by the feedback and suggestions.

We look forward to an answer of the editorial board. Please accept our best regards.

Dr. Jeroen Trybou
Assistant Professor
Ghent University

Reviewer’s report
Title: The Impact of Economic and Noneconomic Hospital-Physician Exchange on Customer-Oriented Behavior of Physicians and the Moderating Effects of Professional and Organizational Identification: A Cross-sectional Study.

Version: 2 Date: 26 December 2014

Reviewer: Domenico Salvatore

Reviewer’s report:

Dear Authors, dear Editor,

thank you for having sent to me the revised version of the manuscript. Authors have considered most of my suggestions and worked a lot on the manuscript.

We like to thank the reviewer for the feedback on our manuscript. We agree that our article has improved by the suggestions and comments of the reviewer.

However, in my opinion, two of the major issues I raised have been only partially addressed.

We agree with the reviewer that we can improve our manuscript by addressing the remaining two issues more precisely and extensively.

1. On what concern the theoretical argument, the issue about the type of the relationships among organizational and professional identification and COBSBs. Why these relationships should not be direct but the moderation relationships described in the manuscript? It does not seem to me that these more complex forms of relationships have been theoretically justified in the paper.

Before tackling this issue in greater depth we note that we explicitly choose to use social identification as moderating variables (and not independent variables) because the reciprocity principle of social exchange has been thoroughly developed theoretically and empirically in previous research. Therefore we argue that, with respect to our independent variables, the choice to use distributive justice and perceived organizational support is justified.

In addition, it has been shown that this reciprocity dynamic is more complex than originally believed. More precisely previous studies have shown that organizational identification and professional identification moderate the relationship between social exchange and employee attitudes such as satisfaction, affective commitment and intention to leave. Building on these studies #15, 28#, we hypothesize our relationships for customer oriented boundary spanning behaviours of physicians.

In general, the importance of moderators arises from their ability to enhance understanding of the relationship between the seemingly established relationships of our independent variables and dependent variables (social
We also note that this approach is, theoretically not different to many other published studies that systematically use social identification as a moderating variable (instead of a direct relationship). Besides to studies that are cited in our article we also like to refer to the meta-analysis of OI as a moderator by Riketta (2005).


However we agree that we could further develop the theoretical argument in our paper.

We argue that there is a sound theoretical underpinning of our choice to include social identification as a moderator. More precisely, theoretically, we argue that social identification influences how people define themselves by group membership. Social identification therefore impacts how individuals interpret and react to organizational actions and thereby impacts the relationship between the exchange relationship and individuals' organizational attitudes and behaviour #31#. Therefore this is an indirect moderation effect on the relationship between social exchange and the outcomes and not a direct effect between organizational/professional identification and our outcomes.

Furthermore we like to clarify that there is no justified theoretical basis to support a direct effect (identification itself does not lead to higher customer oriented behavior).

Finally we note that (also in the previous version) we clarified this theoretical link by the role of hospital administrators.

More precisely, identification with a group leads people to see other group members as being relationally close to themselves and to view other group members as “like them” and “on their side”. Hospital administrators are responsible for mediating physicians' social exchange with their organization. Thus the perceived relational distance from administrators could theoretically influence physicians' interpretation of physician-hospital exchanges #15#.

We hope that by clarifying this in the manuscript we meet the expectations of the reviewer. We feel that we succeeded in framing the study theoretically in a manner suitable (concise) for this journal (which does not focus heavily on the development of theory).

P 7

While many empirical studies have found evidence in support of the norm of reciprocity in a wide variety of organizational attitudes and behaviour #16#, it has been recently argued that social exchange is more complex than originally
conceptualized and personality characteristics may influence the reciprocity
dynamic #28#. More precisely, social identification seems to have powerful
effects on how physicians read organizational actions #16#. Social identification
is the perception of oneness with, or belonging to, a group #29#. Individuals
define themselves in terms of their group membership and ascribe themselves
characteristics typical of the group #30#. Social identification thus influences how
people define themselves by group membership. Therefore social identification
impacts how individuals interpret and react to organizational actions and thereby
and thereby impacts the relationship between the exchange relationship and
individuals’ organizational attitudes and behaviour #31#. Identification with a

Hospital administrators are responsible for mediating physicians’ social exchange
with their organization. Thus the perceived relational distance from administrators
could theoretically influence physicians’ interpretation of physician-hospital
exchanges #15#. Social identification thus influences how people define
themselves by group membership and thereby impacts individual behaviour
#31#.

2. On what concerns the discriminant validity, it would be better to see the results
of the confirmatory factor analysis for the whole measurement model and not
only for COBSBs

In response to this comment we also performed confirmatory factor analyses for
the 4 models that were tested. We also like to note that we used previously
published, validated instruments. Only in case of the COBSB’s we used a
shortened version (as mentioned in the text and the responses in the first round
of review. This is the reason why, in the previous point-to-point response we
only performed CFA for the dependent variables.

The items of the instruments loaded on the constructs. Below we provide an
overview of these results.

Below we provide an overview of the results of the CFA.

<table>
<thead>
<tr>
<th></th>
<th>POS 1</th>
<th>POS 2</th>
<th>POS 3</th>
<th>POS 4</th>
<th>POS 5</th>
<th>POS 6</th>
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</thead>
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<td>0.841</td>
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<tr>
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<td>0.858</td>
<td>0.846</td>
<td>0.835</td>
<td>0.830</td>
<td>0.824</td>
</tr>
</tbody>
</table>
The Statistical Package for Social Sciences (SPSS), version 22 for Windows, was used to conduct descriptive and statistical analyses. Correlation analyses were performed to assess possible multicollinearity between the control variables. The age and tenure variables correlated highly ($r = 0.843$), and so age was not used as a control variable. In addition, since profession (surgery or internal medicine) did not correlate with the dependent, independent, and moderating variables, this control was not included. Descriptive statistics were used to describe the sample and study variables. Confirmatory factor analyses confirmed the distinctiveness of the measures used in this study.

I would also suggest to rephrase all the sentences such as “professional identification DID NOT moderate the studied relationships”. Statistical non-significance of a relationship, also considering the sample size of only 130,
should not be considered equal to absence of a relationship.

We agree with the reviewer and made the changes as suggested by the reviewer.

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The moderating effects of identification

As shown in Table 2, organizational identification positively moderated the positive relationship of distributive justice with external representation ($\beta = -0.156, p = 0.045$). Similarly, organizational identification reinforced the positive relationship of perceived organizational support with external representation ($\beta = -0.146, p = 0.045$). In considering the results of internal influence, no moderating effects were present. In addition, professional identification was not found to moderate the studied relationships significantly. The interaction effects are plotted in Figures 2 and 3.

Another suggestion could be to try to use path analysis (or, even better, structural equation modeling) instead of regression.

We argue that SEM is not really the appropriate statistical technique because SEM is considered a large sample technique. That is, model estimation and statistical inference or hypothesis testing regarding the specified model and individual parameters are appropriate only if the sample size is not too small for the estimation.

a. A general rule of thumb is that a minimum sample size should be no less than 200 (and no less than 400 when the observed variables are not normally distributes)

b. Another guideline is that the sample is 5-20 times the number of parameter to be estimated.


Since we did not include mediating variables (we like to accentuate that previous theoretical and empirical articles also use identification as a moderator, not a mediator) we did not use path analyses or SEM.

Best regards,
Domenico

Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.

We like to thank the reviewer for the valuable feedback on our revised manuscript. We hope that we clarified all remaining issues.
Reviewer's report

Title: The Impact of Economic and Noneconomic Hospital-Physician Exchange on Customer-Oriented Behavior of Physicians and the Moderating Effects of Professional and Organizational Identification: A Cross-sectional Study.

Version: 2  Date: 16 December 2014

Reviewer: Nicolas Gillet

We like to thank the reviewer for the feedback on our manuscript. We agree that our article has improved by the suggestions and comments of the reviewer.

Reviewer's report:
I'm still not convinced by the definition of distributive justice on page 4.
We agree with the reviewer. In this paragraph the definition of distributive justice is too limited. We extended the definition on page 4.

Page 4

In this paper, we study both approaches from a social exchange perspective. More precisely, we apply the concepts of distributive justice and perceived organizational support to study the exchange relationships that hold between physicians and hospitals. Distributive Justice (DJ), which pertains to the economic dimension, refers to the perceived fairness of the outcomes or rewards that an individual receives from the organization. Perceived Organizational Support (POS) can be described as the global beliefs concerning the extent to which the organization values the employees' contributions and well-being.

The rationale for the exclusion of procedural and interactional justice could appear in the paper. Same comment for the short version of the scale of Bettencourt ad Brown.

Indeed we explained this in our point-by-point answer but did not specify this in the paper.

Indeed there are also other forms of organizational justice. However in this study we focus on organization-focused justice and more precisely distributive justice (Rupp & Crapanzano, 2002). We excluded interactional and procedural justice because our study focuses on the effects of physician-hospital exchanges. Building on previous research we identified two types of exchange and used the construct of justice to study specifically the contractual, economic relationship (in contrast to the studying the different types of justice). The other types of justice do not strictly refer to this contractual relationship (but is indeed related to this economic dimension).
To study the latter, we apply the concept of distributive Justice (DJ) to measure physicians’ perceptions of their contractual, financial relationship with the hospital. This refers to the perceived fairness of the rewards that an employee receives from the organization.

We excluded interactional and procedural justice because these two types of organizational justice do not strictly refer to the contractual relationship between physician and hospital. In this study we focus specifically on economic exchange by applying the concept of distributive justice to the financial contract.

We used a short version in order to limit the length of our questionnaire. Physicians are a rather difficult population to survey. They are busy, self-employed professionals with little or no familiarity to the issues under study. Not surprising previous studies also encountered relatively low response rates when surveying physicians (Templeton et al., 1997; Heckman et al., 2009). We therefore chose to limit the length of our questionnaire and used a short version. We note that the independent and moderating variables count 20 items in total.


We measured physicians’ customer-oriented behaviours using a six-item shorted version of the scale of Bettencourt and Brown. We used a short version in order to limit the length of our questionnaire. For each type of COBSB, we used 2 items. Sample items are “I encourage friends and family to come to this hospital for its products and services” (external representation); “I encourage other coworkers to contribute ideas and suggestions to improve services” (internal influence); “I take time to understand patients' needs on an individual basis” (service delivery). The internal reliability for the three scales was acceptable (respectively $\# = 0.81$, $\# = 0.94$ and $\# = 0.80$). A confirmatory factor analysis (principal component analysis with oblique rotation) extracted three factors with an eigenvalue greater than one, which corresponded with the three forms of customer-oriented behaviour. A total of 88.3% of variance was explained by the three factors.
Acknowledged. We added a reference.

Page 4
First, despite the importance of patient-centered care #13# and the abundant literature on social exchange #14#, a limited number of studies have concentrated on the relationship between these two #8#.

My previous comment was: “The response rate is weak and the sample size is limited” but I did not see any answer to this comment.

Title: The impact of economic...

This was indeed incorrect. We corrected the title by adding ‘of’

Page 11: "corresponded with the three forms..."

This was indeed incorrect. We corrected this as suggested by the reviewer.

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
I declare that I have no competing interests

We thank the reviewer for the valuable feedback and suggestions.

Reviewer’s report
Title: The Impact of Economic and Noneconomic Hospital-Physician Exchange on Customer-Oriented Behavior of Physicians and the Moderating Effects of Professional and Organizational Identification: A Cross-sectional Study.

Version: 2 Date: 16 December 2014
Reviewer: Christophe Lemiere

Reviewer’s report:
I am grateful for the authors’ efforts to address my comments.

We thank the reviewer for the valuable feedback and suggestions.

The authors provided some useful details about the three components of their dependent variable. But I must say it confirms some of my concerns.

First, the "external representation" (ER) component is very much related to the POS and OI variables. If you feel supported by (or identified to) your institution, it
is likely you will share this view externally. And the table 2 confirms some severe endogeneity here between these 3 variables.

In response to this comment in the previous revision we extended the examples of the questions to two exemplary items of each instrument. In addition we note that we assessed the correlations between the variables. More precisely the correlations are limited to .424 (organizational identification-POS) and 0.595 (organizational identification and ER). We agree with the reviewer that the concept of ‘external representation’ is highly related to ER. This support our argument that OI moderates this relationship.

Secondly, the third component ("service delivery") is a rather weak measure of customer-oriented behavior for doctors. While it may make sense for classic services (i.e. retail, restaurants...), it may not be the case for doctors, whose customer-oriented behavior may be more influenced by considerations on quality of care or technical complexity of clinical cases (in other words, you may be a nice and responsive doctor, but still incompetent and shunned by your professional colleagues; and this is exactly the situation that many doctors want to avoid).

We agree with the reviewer that it would be interesting to study other types of customer-oriented behavior (patient-oriented behavior and attitudes). We consider this as an avenue for further research. However we like to argument that service delivery is also important (and does not prevent physicians to deliver high quality care). In addition, the ‘technical’ quality is rather difficult to assess for patients (in contrast to service delivery).

Overall, I am still unconvinced about the benefits of such an analytical approach, that is to say an approach "importing" quantitative variables and questionnaires from services studies. However, provided the issue on endogeneity is clarified, I am not against publishing this paper, given that the research questions are very relevant.

We thank the reviewer for his feedback and positive advice to publish the paper. We clarified the endogeneity issue in the discussion.

We also like to clarify that this study is part of a PhD-thesis and other studies apply other approaches (case study research , qualitative research). In these other studies we applied more in-depth ‘rich’ analyses. We agree with the reviewer that this quantitative research has some drawbacks since it is more abstract (because of the scales) but we also believe that this adds to the body of knowledge.
Several limitations should be considered when interpreting the results of this study. First, the cross-sectional design of the study does not permit causal interpretations. In addition we note that the dependent variable external representation correlates highly with organizational identification and perceived organizational support which could result from endogeneity bias.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
'I declare that I have no competing interests'

We thank the reviewer for the valuable feedback.