THE IMPACT OF FRENCH RESEARCHERS IN INFORMATION SYSTEMS: IS THERE A CREVASSE IN THE GLOBAL INFORMATION SYSTEMS PUBLICATIONS?

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Abstract

The information systems (IS) field of research includes research from various geographic areas. The majority comes from North America with Europe being second. Yet, research from France is lacking behind their UK, Scandinavian, and more so recently from their German counterparts. The existence of use of IS in the French business and general community is evident with the use of computers, smartphones, apps, and websites. Yet the study of these systems is not making it to the global stage. The lack of research generated out of France in the global stage leads us to ask the following: Why is research out of France underrepresented in global IS publications. To answer this research question the first step required is a snapshot of the 'state-of-research in IS from French researchers' inquiry to determine the state of French representation in IS journals. This research looks into the AIS senior scholars list of eight IS journals to have the most impact, as a basis to evaluate the state of French research and tries to find trends in recent years to see if there are directions IS research from France that needs to take in the future to have impact on global publications.

Keywords: Europe, France, Impact, Influence, Information Systems Research, Journals, Regions, Scholarly influence

1. Introduction

Information Systems (IS) is a diverse field that is geographically dispersed. The origins of IS research is geographically centered in North America (NA) and the NA region seems to have an insurmountable lead on other regions such as Europe, Asia, Australia, Middle East, Africa, and South America. In addition research out of France seems to be lagging behind some of their counterparts in Europe.

The lag by France may be due to the incentives for researchers set by the institutions, different hiring practices and hiring recognition of international journal publications, philosophical differences, differing models in creating research, and language issues. From the journal point of view there may be some geocentric biases by the gatekeepers, the reviewers and editors, making the journal publication game much harder to play and understand for those researchers trying to publish from outside of NA.

The current study will try to understand this lack of output from France and will start with a snapshot of the current 'state-of-research in IS from French researchers' and the European

point of view. We first start by looking at the publication frequency of different regions and countries for the Association for Information Systems (AIS) Senior Scholar's basket of eight IS journals. The remainder of the paper is organized as follows. We look at the NA model of IS journal publication, the current 'state-of-research' in the basket of eight IS journals, focus in on the French generated publications, and some possible issues in France. The work will present the methodology, data collection process used, and analysis results. Finally the research will look at limitations, future areas of research, and end with a conclusion.

2. Academic Models

We first need to look at the different academic models of NA versus Europe in order to understand the differences in research publication output. This section will look at the differences between the NA model and the European model of academic research.

2.1. North American Model

The North American Academic Model divides universities into two distinct philosophies, the research university versus the teaching university. The research university model, while conducting classes and teaching, is focused more on research output and impact. The teaching university, while still encouraging their professors to conduct research, is more focused on educating their students. Teaching universities are not focused on heavy research, nor publication in highly impactful journals, but are focused on providing quality education for their students. The promotion and tenure (P&T) committees for research universities are more focused on research impact and publication in highly visible journals while teaching university P&T committees are more focused on the professors teaching ability and quality of their classes offered to students.

The current research focuses on the research universities research output. The research university still requires high levels of teaching, but the main focus for the research university is to gain impact and visibility by promoting their world-class researchers. Theses universities philosophy is that the top-level researchers in the field 'know' the field well and should be able to teach their topics as well. Professors from research universities tend to strive to publish articles in the most impactful and highest level journals and are willing to play the publication game that is driving the acceptance into these journals.

2.2. Journal Evaluation Issues

One area of concern is also the existence of multiple levels of journals. While there are many rankings that rank journals into many strata such as A, B, C, and D level journals, for arguments sake we distinguish journals to be of high-level and low-level, or non-high-level journals. For the current study we categorize high-level as those being in the basket of eight IS journals and low-level as those not in the list of eight.

Rankings of journals has become a surrogate measure for impact in the IS field. Regardless of whether you are a professor at a teaching university or a research university, if you produce research, these journal rankings are an integral part of the researchers life. From the decision of choosing a journal, to submitting to a journal, going through the process of reviews and resubmitting to the journal, and most often getting rejected and going through the process all over again with another journal, the journal rank and reputation is used to drive all these decisions and the rigor of the process is dependent on the rank of the journal. Both sets of researchers (research or teaching university) make decisions based heavily on the rank of the journal, while trying to get into a journal as high as possible, with the expectation that the research will be able to get through the review process. Other factors might come into this decision process such as having a colleague as an editor or reviewer at the journal, having

published at that journal in the past, or having research that fits into a special issue at that journal.

For the research university professor, the trick is to try to produce quality research that can get into the highest possible ranked journal. For the teaching university researcher, their research may be limited to the low-level journals based on their research quality and experience.

There are many journal ranking studies in the IS field. These studies try to create a list of journals and rank them according to importance and quality. The effects of these journal rankings and their studies are difficult to assess and are imprecise and anecdotal. P&T committees often include members that are not part of the domain of the researcher that is being evaluated. For these members who are asked to make evaluations outside of their field, reliance on these journal studies may seem to be the only way they can make an evaluation of a researcher outside their field. Due to time constraints and ease of use, all members of P&T committees understandably use these journal rankings as a surrogate to understand the research output quality of the professor in question, but the P&T committee members have little understanding of the journal rankings used and how these journals became high-level journals (Truex et al. 2009).

Often universities use more general journal rankings studies such as those published in Business Week, Financial Times, The Thomson Reuters Web of Science Impact Factors, or the Wall Street Journal, as opposed to more specialized journal rankings such as the AIS Senior Scholars basket of eight IS journals. This adds burden to the IS community to educate the P&T committees in the importance of such specialized journal rankings and how they should be used.

The creation of these journal lists and being approved to be used in P&T committee's decision-making process has historically been a political process influenced heavily on personal, temporal, and geo-centric factors. Evidence shows that journal rankings have been geo-centric, often being skewed in favor of the NA region (Kateratanakul et al. 2003; Mylonopoulos et al. 2001; Schwartz et al. 2004). Often journal ratings decisions are made by a consensus of influential scholars at any given institution (Mylonopoulos et al. 2001).

Journal ranking studies are broken into two major groups, those that use surveys or done by bibliometric measures. The survey method is typically done by sending surveys to professors in the field across the globe (or in one geographic area) and has the professors rank the journal with their perceptions. There might be some disciplinary, methodological, departmental or personal preference that can influence the decision of these survey results. For instance, a survey taker might have ulterior motives to promote journals they are associated with, such as being an editor, reviewer, or a past author in that journal. There exists a fundamental assumption by the producers of these journal rankings studies that the survey taker is qualified to and representative enough to make the decision to rank these journals. However often times we see these journal ranking studies do show bias to geo-centricity, especially towards research published out of NA and Europe (Kateratanakul et al. 2003; Mylonopoulos et al. 2001; Schwartz et al. 2004). The bibliometric measures are somewhat less prone to this bias and use some form of citation measure, such as the Hirsch index (h-index), to analyze historical data of the journal output to rank the journals by the most impactful journals.

The creation of approved journal lists at universities has historically been a political exercise in the university community. Often university administrators are under pressure to adapt major rankings in highly visible outlets such as the aforementioned publications, the Wall Street Journal, Thomson Reuters, Business Week, and Financial Times. Each of these outlets use some assumptions about which outlets are the best journals, for example one assumption might be due to the reputation of the authors affiliation, but where do the affiliation rankings

come from? Some university committees use journal-ranking studies that are most often referenced as the de-facto journal ranking to use.

The process of ranking journals is further muddled by the fact that the IS discipline is described as being a 'fragmented ad-hocracy (Banville et al. 1989) and is a mix of different reference disciplines, sub-disciplines, philosophies, theoretical frameworks and research methodologies. Allegiance to these different methods and ways of thinking can further bias the journal rankings towards popular or a 'largest-population' type of atmosphere already perpetrated by the geo-centric bias of these studies. Alternatively there are calls that we need, as a fragmented discipline, to accept and nourish these more unpopular genres and disciplines and should have more possible outlets recognized in these areas (Wilcocks et al. 2008).

Another problem is the temporal issue in that journals reputation, their audience, their acceptance tendencies, and review process change over time. Journals can change from academic oriented to becoming more practitioner oriented, such as the case of the Communications of the Association for Computing Machinery (CACM). Journals can also become more and more selective over the years which is the case for the Journal of the AIS which was first published in 2000, which was a new journal, and thus had very little reputation but has since gained status, and now is on the basket of eight IS journal list. The additional problem is that journal rankings studies also need to change over time to reflect these changes and the journal rankings themselves can change over time (Adams et al. 2008; Lowry et al. 2007). In addition there is a 'halo' effect where a once highly regarded journal tends to lose its reputation slowly and keep that reputation, not on their current merit or current publication output quality but by the fact that the journal tends to keep its reputation in the 'memory' of the readers and academic community.

Many of these issues are far too large for the current study. This study will look at the current state of IS journal output and try to see how France fits into this picture. We will also look at how other geographic areas of IS research need to be represented in the future.

2.3. France Issues

France has a distinct language disadvantage compared to the English speaking countries like the US, Canada, Australia, and the UK. This hurdle has been a problem in getting international research out to the rest of the world. The European Commission (EC) has cited Australia as a possible research partner given their ability to produce international research and France is named as one of the countries that can benefit from a research agreement (European Commission, 2015). One can also note that in addition to the language issue there are cultural issues with the journals in question. All of the basket of eight journals are English based and the majority are from North America, based in the US, and the remainder are from Europe and are based in the UK. The editors, reviewers, and the majority of authors are also going to be pulled from English speaking researchers making it difficult for non-English speaking researchers to break into this system.

Another problem with the French researcher is the culture of producing research in France. The "publish or perish" model of pressure to produce research is felt in NA but is not the case in France. The French university professor is a civil servant and does not have the obligation to produce research and publish to keep their job. This inherent culture in the French university system can be a hindrance for French researchers to publish in the top international IS journals.

While these problems exist for many nations, some are able to overcome these issues. In particular Germany has been noted as recently gaining steam and being able to publish in this

area (Takeda, 2015). German researchers are becoming more and more represented in IS conferences and soon we should see more German researchers publishing in IS journals.

3. Methodology

The AIS Senior Scholars' basket of eight IS journals consists of the following journals in alphabetical order; the European Journal of Information Systems (EJIS), Information Systems Journal (ISJ), Information Systems Research (ISR), Journal of the Association for Information Systems (JAIS), Journal of Information Technology (JIT), Journal of Management Information Systems (JMIS), Journal of Strategic Information Systems (JSIS), and Management Information Systems Quarterly (MISQ). The initial basket of journals only included six journals where JIT and JSIS were excluded from the list. Two journals, ISR and MISQ, are the only two in the list of eight that appear in the Financial Times A-level journal list. All journals are published in the United States except for, EJIS, ISJ, and JSIS, which are published in the United Kingdom. The current study takes a look at publication output in these eight journals.

3.1. Publication Data

The publication data was taken from 1990 to 2012. Some journals publication data was missing earlier years as they did not start publishing until later than 1990. These were EJIS, ISJ, and JSIS which started in 1991 and JAIS which started in 2000. For authors affiliation the home institution at the time of publication was the basis for the country data. The authors birth or education home institution was not used for this study. Based on the goal of this research study the affiliate institution's location is the production base of the author. Normalization for multiple authors was not done. Simple author count was used. If a paper had three authors, then each author and authors affiliate country was given a count of one each.

3.2. Data Source

The data was taken from the "Rankings Based on AIS Scholars' Basket of Journals" (Venkatesh, 2012) website. Data queries were run for each journal between 1990 and 2012. The output was copied into Microsoft Excel and then onto Microsoft Access to create a database of the basket of eight journals. The database was then queried for country and regional sorting and rankings. Regional and country data was aggregated and put into excel for the tables of this study. Yearly data had to be pulled one year at a time from the website as it only produced a list with a maximum limit of 100 records.

4. Results

Table 1 shows the amount of French research output in the basket of eight IS journals.

Table 1 Top Eight IS Journal Publication by Authors with French University Affiliations (1990-2012)

Journal	Total	France	Percentage
EJIS	1079	23	2.13
ISJ	657	3	0.46
ISR	1053	4	0.38
JAIS	568	5	0.88
JIT	846	12	1.42
JMIS	1458	13	0.90
JSIS	613	17	2.77

MISQ	1259	8	0.64
Total	7533	85	1.13

While the table shows the existence of research coming from France, the numbers are few with a low count of only 3 represented in ISJ in 23 years and a high count of 23 papers in EJIS in 23 years. Percentage wise we see a low of only 0.38% in ISR to a high of 2.77% in JSIS share of all publications in 23 years. The total in the basket of eight journals is 85 papers in 23 years with a 1.13% share of the total number produced in these journals.

Next we look at the European region.

Table 2 Europe Region count by country for all years (1990-2012)			
Country	All eight	Top Six	FT Two
UK	849	465	54
Netherlands	176	118	23
Germany	129	96	27
Finland	102	81	20
Ireland	92	54	10
France	**85**	**56**	**12**
Sweden	84	57	8
Denmark	80	62	17
Norway	57	44	9
Spain	55	36	10
Switzerland	47	36	10
Scotland	39	23	2
Greece	33	26	0
Italy	31	18	3
Austria	29	24	7
Belgium	13	8	1
Portugal	7	6	1
Turkey	7	6	1
Cyprus	4	3	1
Liechtenstein	4	3	2
Slovenia	3	1	0
Bulgaria	1	1	0
Estonia	1	0	0
Hungary	1	1	0
Lithuania	1	0	0
Luxembourg	1	1	0
Poland	1	0	0
Russia	1	1	0
Serbia	1	1	0

In the 23 years of data we see 29 countries represented. The top is the UK, then the Netherlands, Ireland, Germany, Finland and France in sixth place in the region. Now looking at the more recent 5 years of data.

Table 3 Europe Region count by country for last five years (2008-2012)

Country	All Eight	Top Six	FT Two
UK	176	101	22
Germany	92	70	21
Netherlands	61	48	12
France	**48**	**34**	**5**
Sweden	38	23	4
Denmark	31	26	5
Switzerland	27	23	9
Ireland	26	23	3
Finland	24	18	6
Spain	20	14	6
Norway	19	11	3
Austria	16	13	5
Italy	9	8	1
Greece	7	3	0
Scotland	5	5	2
Portugal	4	3	1
Belgium	4	2	0
Liechtenstein	4	3	2
Turkey	3	3	1
Slovenia	2	0	0
Cyprus	2	2	1
Luxembourg	1	1	0
Poland	1	0	0

We now see only 23 countries represented in this table, with a few countries falling off when looking at only the last five years. We see the rankings in the last five years have now changed as well. UK is still in first with second now going to Germany, followed by the Netherlands, and then France in fourth place. For France, we can see that over half of the production over the 23 year period in the basket of eight or six have been in the last five years. 48 out of 85 papers in the basket of eight have come in the last five years, and 34 out of 56 papers in the basket of six have come in the last five years. For the top two journals (FT two) only five out of twelve have come in the last five years. The increased productivity in the last five years shows that France has started to make inroads into the international publication game in recent years. Note that Germany has produced an even larger percentage of their share in the last five years compared to the data over all years.

Finally looking at the regional differences:

Table 4. Author Count by region for the All Years (1990-2012)			
Region	Total	Six	Two
North America	4485	4018	1843
Europe	1934	1228	204
Asia	626	508	178
Australia	360	228	64
Middle East	76	64	17
Africa	23	12	4
South America	13	1	1

We see a strong dominance by NA and then Europe, with Asia and Australia following.

Looking at the past five years we see table 5.

Table 5. Author Count by region for the Last Five Years (2008-2012)			
Region	All Eight	Top Six	FT Two
North America	1483	1316	602
Europe	620	434	109
Asia	294	259	107
Australia	120	88	27
Middle East	29	26	8
South America	8	0	0
Africa	4	4	0

We see a similar dominance by NA followed by Europe, Asia, and then Australia. One thing to notice though is that Asia is becoming a strong contender for second and Europe holds only a small lead in the 2nd position for the FT Two. Over the whole 23 year dataset Asia was a farther distant third compared to Europe.

Finally to see the possible loss of Europe on the second position we look at a cross tab table of Journals and Regions over all years of the study (table 6)

Table 6 Cross-tab table of Journals vs. Regions over all year (1990-2012)								
Journal	Total Authors	Africa	Asia	Australia	Europe	Middle East	North America	South America
EJIS	1079	6	77	76	519	12	389	0
ISJ	657	2	42	45	305	7	256	0
ISR	1053	0	94	24	69	6	859	1
JAIS	568	0	60	26	74	13	395	0
JIT	846	7	50	87	450	3	241	7
JMIS	1458	0	151	17	126	15	1135	0
JSIS	613	4	68	45	256	9	226	5
MISQ	1259	4	84	40	135	11	984	0
Total	7533	23	626	360	1934	76	4485	13

In table 6 we can see the overall dominance of NA but also see that Europe is a strong second overall. There are three important results to point out here. First, we see strong European presence in the European journals, EJIS, ISJ, and JSIS, as European output are number one in all these journals and NA is a close second. We also see that Europe is dominant in JIT. The second finding is that for two journals, ISR and JMIS, Asia is actually in second place overtaking Europe. Third, we find that Australia is well represented in the European journals, is third in ISJ in front of Asia and is close to overtaking Asia for third place in publications in EJIS. From this data we see the geocentric nature of journals. The data suggest there might be Asian authors tend to author like their NA counterparts, while Australian authors mimicking the pattern of European authors. We might also be seeing more globally open publication from the European journals and in particular more open publication by JMIS which accepted more Asian generated content.

5. Analysis

The data in general shows a lack of representation coming from French research in the IS global publication field. We find the data suggests that France is moving forward in a good direction but needs to keep up with its neighbors, especially Germany. The recent increase in publications coming out of France may be due to the recent (2007) creation of AERES, now called HCERES, for the evaluation of university teaching and research. This agency evaluation process has induced a stimulation of research production out of the French research center. Another factors is that many French business schools are strongly involved in the NA accreditation systems such as the AACSB, EFMD and AMBA. Finally FT and French newspapers have been investing in research output of French authors in the last 10 years.

5.1. Limitations

There are four main limitations in this study. First the data was tied to the home institution of the researcher at the time of publication. This does not mean that the researcher is French per se, but that they published the papers when they were affiliated with a French institution. The nationality, the birth place, the native tongue of the researcher, or their home institution where they received their academic training are all not considered. While we acknowledge that this is a limitation, we feel the researchers home institution is a de-facto country of origin of the research, as the researcher is receiving support for their research in that country, and they are writing their research as a representative of that institution. Future research may look at some of the other factors that can be used for the origin of the researcher. For home training institutions the measure may be more difficult as many researchers do work internationally and may have a different country of education for their different levels of education. For example one may receive their bachelors degree in Canada, their masters in the US and Ph.D. in France. In this case we think the home training institution should be the home country of the terminal degree.

Second, this research only considered the basket of eight as target journals. Within the IS publication field there are many journal outlets that exist and these were not taken into account in this study. Only the ones considered the 'A' journals by the AIS senior scholars were used and by taking a broader list of journals, and including 'B', 'C', and lower level journals we may see different results and may find a better feel for the field as a whole. Future research may look at these other journals.

Third, the research only considered the IS field. While expanding this study to other fields, we may see that there are different countries and regions that are stronger in particular fields in business research. We may also find areas that countries and regions are weak. We do not purport that this study is able to generalize to any other field than IS. Future research may replicate this study outside of the IS field.

Finally, different publication practices are not taken into account. The practices such as co-authorship practices or citation practices are not taken into account. Co-authorship practices, where there is a tendency to co-author with many other authors or the practice of solo-authoring was not accounted for in this study. The study counted each publication as a count of one publication for all authors. So if researcher A, B, and C were co-authors for a paper they each received a count of one, and thus the country they represent got a count of one, regardless of the number of co-authors. If a paper was sole authored by researcher D, that researcher got a count of one and their representative country a count of one. Altering this to weigh different co-authorship, such as making researcher A, B, and C share one count, thus each getting 1/3 of a authorship may change the results. Generally we saw non-NA studies, where multi-authored papers tended to be authored with other researchers in the same

country. So accounting for sharing one count would probably lower French influence numbers. Citation practices such as how it takes years to get citations and how citation numbers tend to show influence can be used to show influence of different regions. This study only looked at publication counts. Influence numbers such as citation or the h-index can show impact of different groups of researchers. Future studies can look at citations numbers or account for multiple authorship to see if publication numbers change.

5.2. Future Research

Given the limitations of this research it may be possible to extend this research to include more journals, expand to other fields outside of the IS field, and to use different counts in publication practices. These extensions can be future research for the current authors or other researchers.

6. Conclusion

This is an exploratory study into the country specific publication success in the IS basket of eight journals. We were in particular interested in France and how France was represented in the European region. We found that France is moving in the right direction but is lagging behind their German and UK counterparts. We call on other researchers from France to create interesting research that can be published to global publications.

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