

Brand Extensions: A Methodological Perspective

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Abstract: This study is a comprehensive and integrative literature review in the field of “brand extensions”, bordering the methodological, publication and citation analysis. The included literature consists of number the empirical quantitative articles spread on 24 years, i.e. from 1990 to 2014. The result shows that the most popular region is North America publication wise, with experiments as the highest used research design, non-probability sampling methods and ANOVA as highly used statistical technique. The consumer goods hypothetical brand extension studies performed reliability techniques, but not validate the constructs or content very frequently. The number of authors changing from single to two authors, increasing inter-regional and intra-regional collaboration ties.

Keywords: *brand extension, content analysis, methodological trends, publication trend*

Introduction

The introduction of new products or services variation as extensions has become a popular marketing strategy and is a widespread concept now. This process is known as brand extensions. Organization have eased up the process of acceptance and adoption of that product by the consumer, as they are familiar with the existing brand and have already adopted it. Brand extensions not only decrease financial risk of launching a new product in the market (Aaker & Keller, 1990) but can also enhance the brand image and brand equity (Dacin & Smith 1994), in result helping in the growth of the brand (Springen & Miller, 1990). Brand extensions can also decrease the promotional expenditures of a company (Morein 1975) and the cost of accessibility to the distribution channels in the market.

A lot of work has been done on brand extensions in the present century. To make a brand extension successful the variables such as the consumer’s judgment of a relationship of a parent brand and its extension, the value added by the extension to the extended brand and the positioning of the brand are studied to maximize the brand capital. (Nijssen and Agustin, 2005) The purpose of this paper is to investigate the trends and developments in the area of research methodologies, publications and the citation analysis in brand extensions literature to provide a systematic and methodical analysis of the past empirical studies over time in different cultures to facilitate the future researchers and to give suggestion for future research opportunities.

The method adopted to achieve this task is a content analysis of journal articles in the selected databases. According to Krippendorff (1989), “content analysis allows researchers to establish their own context for inquiry, thus opening the door to a rich repertoire of social-scientific constructs by which texts may become meaningful in ways that a culture may not be aware of”. The research on the Brand extensions revealed that there is a lack of comprehensive and thorough literature review. There was just one literature review proposing a conceptual model on the findings was published in 2003 (Hou, 2003) found. But it can be seen that since then the brand extensions concepts, strategies, and methods have changed and evolved considerably. The mentioned literature review only included the articles of the 90’s, therefore, to bridge this huge gap there was a need of an integrative and systematic review of brand extension literature since the starting of the development of the idea till the present day.

The use of the basic and advanced cross tabulations to seek the hidden trends and patterns invisible otherwise is an important factor of this present study. This technique, or it can be said that, that no techniques used in this study has been adopted in this particular discipline before. Therefore, this techniques will be useful in unearthing the facts and figures which will help the researchers and counsellors to assess the complete knowledge present in this particular discipline.

For this study, 229 articles were identified, but after checking the reference ad the relevancy of the articles, the final sample came out to be 192 articles.

Literature Review

Research Questions

By keeping in mind the purpose of this study, following research questions were formulated:

- I. What research designs and methodologies have been adopted by the authors for the past 24 years in the domain of the brand extensions? What analytical and statistical techniques have been used in the past and present?
- II. What are the publications trends across different geographical areas in different time periods keeping in view the variables like preferred journals, universities producing most publications, authorship collaboration and geographical associations of researchers?
- III. What are the trends in the citations of the articles year wise in the field of brand extensions?

Lack of a literature review in the area of brand extensions

Content analyses of journal articles provide a prospect to periodically evaluate the congruence of the professional literature with the discipline's purpose, interests, and values (Buboltz, Deemer, & Hoffman, 2010; Lee, Rosen, & Burns, 2013). It can also identify trends and changes, which likely affect counselling practice (Loveland, Buboltz, Schwartz, & Gibson, 2006; Williams & Buboltz, 1999).

Brand extensions are a dominant marketing strategy and practice which has attracted a sufficient amount of research during the last decades since 1980's.

There are number of meta-analyses done in this field but there was only one systematic literature review done (Jianwei Hou, 2003). The mentioned study is not a systematic literature review. Briefly, if this study is reviewed, it has used the research on brand extension for more than a decade was taken to form a conceptual model, by classifying the revealed important factors into five categories for better understanding, i.e. Firm characteristics, core brand characteristics, extension characteristics, consumer characteristics and marketing strategies. These categories are further divided into sub categories to explain them further.

A Meta study on cross cultural comparison of the brand extension success factors, reveals that experiment (laboratory), as a data collection method, was used by Aaker and Keller (1990) has been replicated several times since then. The study takes the actual study and the replication as part of their Meta study. (Henseler et al, 2010). In the study conducted on Organizational Research Methods, containing 1929 articles, experiments were found the second most popular research design after passive observation (Austin et al, 2002). On the other hand, another study reviewing 609 articles, found experiment as most popular as compared to non-experimental designs (Stone et al; 1995).

As a whole, not only the organizational research methods as a whole, but brand extension domain have also been going through a phase of change.

The conceptual model explains how the consumer evaluate brand extensions by keeping in mind the above mentioned characteristics. It also explains how the brand extensions affect the attitude of the consumer toward the parent brand. The consumer evaluation of brand extension was the interest of many authors in last decade of the last century (MacInnis and Nakamoto, 1990; Chakravartiet *al.*, 1990)

The Firm is described in terms of its size and its reputation. It is elaborated that the firm size and the extension is dependent upon the consumer cultural background. It depends on the consumer how importance it will give to firm size but firm credibility do increase with the success of every brand extension. Brand strength and brand breadth explains the core brand characteristics. Brand extension is closely related with 'perceived fit' (Aaker & Keller, 1990). They also instigated that the consumer evaluate dissimilar extension more favorably than the similar ones if the core brand is of high quality (Aaker & Keller, 1992).

The brand extensions are seen as a successful and a very important marketing strategy tool. Brand extension helps companies in many ways such as minimizing the risk of introducing a new product, reducing the cost of promotion and increasing the acceptability of the new product by consumers. (Khuswaha, 2012) Similarly, the extensions increase the brand breadth which leads in the increase on perceived fit of extensions (Boush&Loken, 1991).

The degree of perceived fit or similarity between the parent brand (core brand) and the brand extensions is not a new phenomenon. Perceived fit is the consumer's perception regarding the new item being consistent with the parent brand. There are three dimensions of perceived fit between core brands and the extensions i.e., complement, substitute and transferability of resourced a firm uses to make the parent product to the extensions (Aaker& Keller, 1990).

Consumer reactions to brand extensions has a primary focus on the judgmental effects of the congruency between the attributes, benefits, and uses of established in comparison to new products sharing the same brand name or brand extensions. (Kardes& Allen, 1991)

In the study by Hou (2003), Consumer characteristics include the product knowledge i.e. how familiar the consumer is with the product. It can act strongly in acceptance of brand extension. Further, the variability in culture, mood and age also influence the consumer's evaluation of an extension.

To summarize, according to Hou's findings there are mixed result as far as consumer evaluations are concerned of brand extensions. The successful brand extensions may result in negative effects on consumer evaluations and vice versa. The quality or other core brands variables have to be consistent with the extensions otherwise the core brand beliefs will be diluted.(Loken& John, 1993)

This limited research, strengthen the belief that there is a lack of in- depth, comprehensive, up to date and complete analysis in the field of brand extensions. The present paper goes much ahead of the previous study and performs the analysis, in terms of methodologies, statistical techniques, publication trends not only in different geographical regions but also in different time period. Table 1 shows the scope of the paper, by mentioning all the important features of the present study.

Methodology

This study is using content analysis as a major analytical method. Formally, it is a qualitative or quantitative technique, depending on the form of analysis, for research for making valid and repeatable inferences about the context for which it is being studied from the data collected.

Quantitatively, researchers has used to analyse and integrate the methodological trends, sampling methods, sample size, data collection methods and statistical techniques etc. On the other hand, as a qualitative tool of research, it can be used to analyse the models, themes, key word analyses, citation analyses etc.

Selection of articles

The identification, selections and short listing of articles consists of following steps:

- i) The literature for brand extension was searched on widely used and popular databases of Business Source Complete and Science Direct. The keywords used were a) brand extensions, and b) brand extension, in the categories of 'title', 'abstract' and 'author provided keywords. The options of 'Full Text available' was also included in the research process

- ii) The publication type was “academic journal” and the document type was taken as “Articles” in English language only.
- iii) The Journals of ‘Management’, ‘Business’ and ‘Economics’ were selected for further narrowing down the results.
- iv) The search in Business Source Complete returned 167 articles and the Science Direct search returned 117 articles, ranging from 1972-2010, a period of 38 years. The total number of articles from both the databases were 284 in number, excluding duplicates.
- v) From both the databases, the articles were shifted to RefWorks, a software for bibliography management, and the duplications were removed. After removing the duplications, the number of articles reduced to 229. These 229 articles were, then, exported to Microsoft Excel for further analysis. A unique numerical identifier which will remain the same for all the analyses. This was to assure the identification, and the uniformity in the analysis.
- vi) The relevance was identified. Some articles, though came up in search in the databases were not found to be relevant and therefore, coded as non- relevant. Here, only those articles were considered as relevant which have included as their main theme. This has reduced the number of articles to 192.
- vii) Then the data was cleansed (deleting the columns which were not required) thoroughly, and then reformatted to bring it to specific format for further use.

Coding of articles

Now the requirement was to identify the articles which are Empirical and Quantitative in nature. For this study, the following definitions have been taken for Empirical and Quantitative:

“Empirical studies are classified as the studies which have used the primary data as their data source” or "a research based on experimentation or observation conducted to test a hypothesis.”

Quantitative studies are those which contain the hypotheses for testing and contain some statistical technique for analysis of data. Primary data was considered as the data collected first hand by the researcher.

In the next step, the articles which were quantitative in nature were identified, and then they were further categorized as empirical or conceptual, keeping in mind the above mentioned definitions.

The two topologies were mixed to form a research design: empirical quantitative. Hou (2003) have not mentioned any details regarding the choice of articles, number of articles. It has just mentioned the number of years from which the articles are being chosen and the formulation of model to further explain the empirical findings. Contrary to this, the present study has a clear mentioning of the procedure adopted for choice, coding and in the next section the conduction of the analysis as well.

Table 1: An Overview of the analysis in the current paper of brand extensions content based literature study.

Important features of the study	Current Paper
Publication counts by selected journals	X
Identification of publications by author(s)	X
Identification of publications by year of publication	X
Publication counts by research methodology	X
Industry type	X
Research Type -Quantitative	X

Research Type -Empirical	X
Research Design-Sample size	X
Research Design-Data Collection Method	X
Research Design-Country of Data Collection	X
Research Design-Respondent Type	X
Research Design-Statistical Techniques	X
Research Design-Reliability and Validity	X
Research Design-Response Rate	X
Research Design-Sampling Methods	X
Research Design-Pre-test/Pilot	X
Research Design-Cross Section/Longitudinal	X
Research Design-Sources of Secondary Data	X
Research Design-Survey, Model, Experiments, Simulation etc	X
Brand extension Type: Actual or Hypothetical	X
Unit of Analysis: Brand extension or Individuals	X
Publication Trends-Authorship Type-Academics vs. Practitioners	X
Publication Trends-Authorship Collaborations by Regions	X
Publication Trends-Authorship Per Study	X
Publication Trends-By Journals	X
Publication Trends-Most Prolific Authors	X
Publication Trends-Most Influential Universities	X
Publication Trends-Top Cited Articles	X

Types of analyses

The analyses were conducted in parts. The articles chosen for the methodological trends were all empirical quantitative articles identified, totalling to 142. By the simple methods of counts and frequency distributions the trends were identified. Pie charts and bar charts are formed to investigate the trends in pictorial form. Further, the cross tabulation of different variables, the meaningful relationships were analysed. On the other hand, the publication trend and the citation analysis were conducted on all the relevant articles i.e. 192.

Methodology

This paper is projecting and analysing results from three different perspectives. Results from the methodological trends, b) publication trends and c) citation analysis.

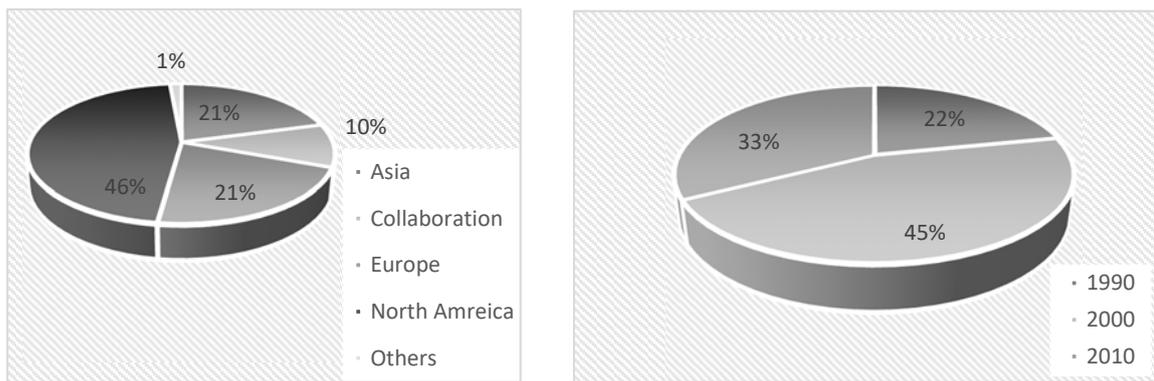
Methodological Trends

This section of methodological trends and development in the chosen field provides a systematic and integrative review of 140 articles. **Appendix I** provides the results of the analysis conducted on the data in terms of time, geographical region and time-regions.

The analysis is based on the graphical illustration as well the tabular representation and compilation of data. Appendix I, along with the graphical representations elaborate on different developments in the domain of brand extension.

Figure 1: Empirical Studies Time wise

Figure 2: Empirical Studies Region wise



For the purpose of analysis, throughout uniformity has been adopted in terms of time period and the regions. The time period is divided into three categories. i.e. from 1990- 99, 2000-2009, 2010-2014. The reason for this distribution is that the first empirical quantitative articles during the search were from 1990(23% of the total articles). This decade has the lowest number of articles in this domain. The number of articles increased considerably in the decade of 2000.It was 46% of the total articles, which is double as compared to the last decade. But it is seen that the researches done on brand extension in the five year i.e.2010-2014 is almost 32% of the articles selected, shown in Figure 1.

Similarly, the regions for the whole analysis have been divided into five parts; North America, Europe, Asia and Others. The category of others contains Australia and African countries. There has been another category included termed as ‘Collaboration’. It means inter regional collaboration in the research area. The analysis shows the highest amount of articles from North American region 46%, 20% each from Asia and Europe,10% from Collaboration and only 1% from Others shown in Figure 2.

Figure 3 presents the publications distribution among various regions over time. All the regions are showing increasing trend, but one thing noticeable is the increase in the collaboration between the different regions. This may be due to the reason of increased globalization in the 21st century. The brand extensions are not confined to the area where the company belong to, but it is been done all over the world for the multinational companies. This has led the researchers to study the differences in cross cultural effects of brand extensions.

The predominant research design in the brand extension technique seems to be simulation based or experimental design based research. In the domain of brand extension 59% of total articles seems to be based on experiment and the remaining 41%. Figure 4 and Figure 5 shows the analysis of the research design in each time category and the region category respectively. Time-wise analysis shows that in 2000-09 almost 26% of the studies of the total articles were based on Experimental design research. Similarly, 19% of the studies were based on survey based studies in brand extension discipline. Region wise North America got the highest i.e. 28% of the total studies are from North America, while 12% are from Europe. Both of these regions have collectively, 40% of the total studies as experiments. This is due to the increase in popularity of the experiment as a whole in the different aspects and fields in different disciplines.

Figure 3: Publication trend

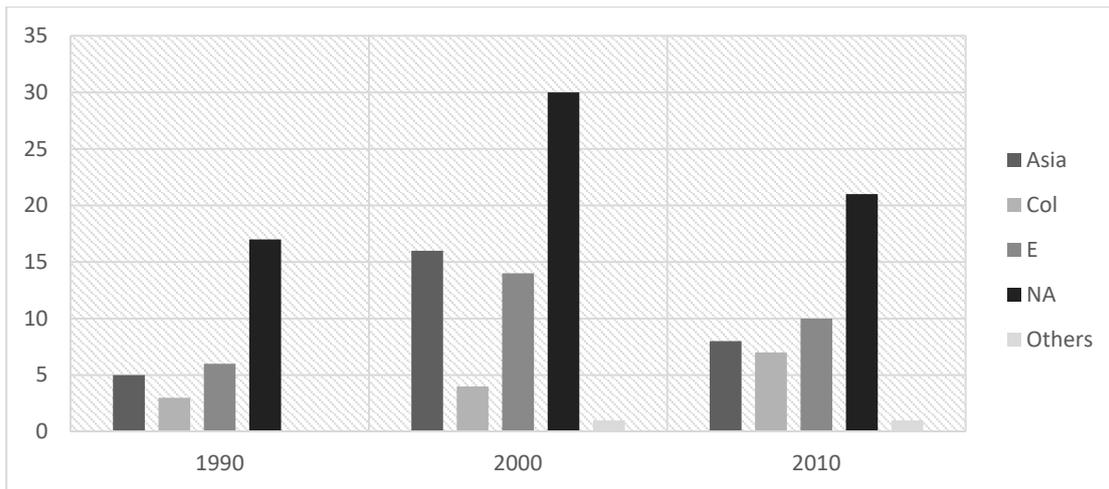


Figure 6 shows the cross tabulation based chart of the research design region-time wise. In Asia and Europe, the increase in the adoption of the experimental design as the chosen research methodology has increased from 10% to 30% i.e. almost 3 times increase. It is understood that, if the research is being done in collaboration the survey seems to be the best instrument for the research. This fact can be shown clearly from the figures which show the increase in the brand extension arena a considerable increase i.e. from 7% to 36%.

Figure 4: Research design Time wise

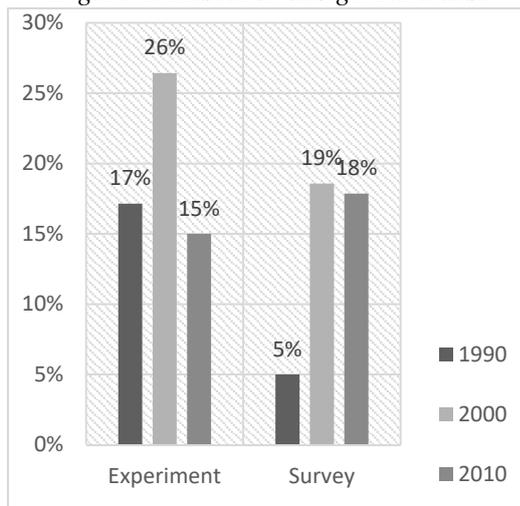
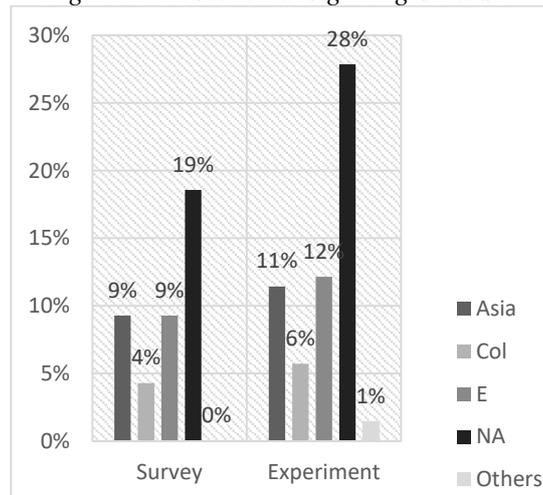


Figure 5: Research design Region wise

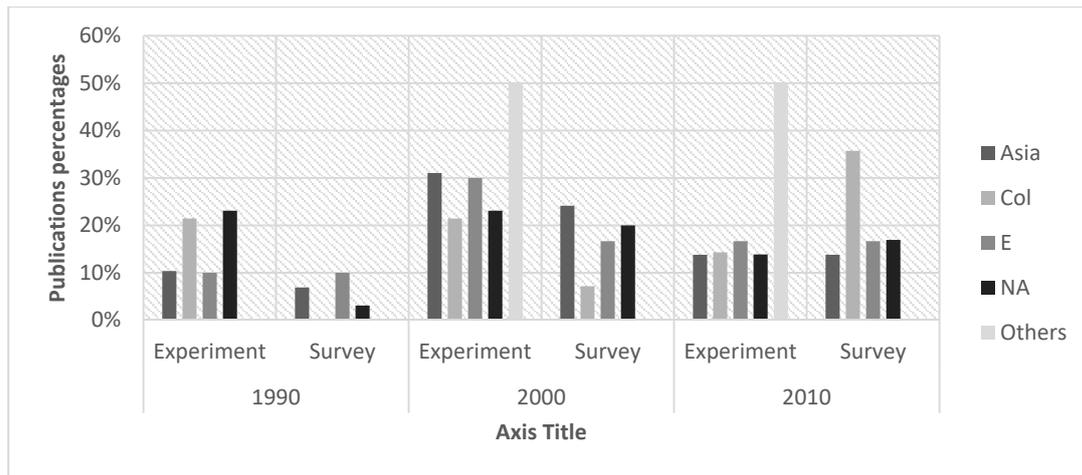


As part of this study, the need for further analysis was felt in terms of methodological developments and trends. Therefore, in the next section, not only further analysis on the research design, sampling methods, time horizon, type of respondents, industry type, sample size and statistical techniques used in brand extension empirical quantitative articles.

Advanced Analysis on Methodological Trends

Appendix I contains both frequencies and percentages. The results in this section shows that in the empirical category, almost 96% are pure empirical quantitative and only 4% are empirical mixed method. Mixed method means the article which has used both the quantitative and the qualitative techniques as part of their research. For this particular study, mixed method is also treated as empirical quantitative.

Figure 6: Research design analysis region-time wise



Out of 143 studies included in this study, the prominent sampling methodology seems to be Non probability techniques (83%) and the remaining is probability sampling, having random sampling the most prominent. For this study out of all non-probability techniques, convenience, judgmental, and quota sampling was used, convenience was the most popular techniques among them. The type of data is cross sectional (99%) and only 1% longitudinal. The unit of analysis used is mainly categorized into two parts a) brand extensions (73%) and b) individuals who consist of consumers (22%) remaining are experts and professionals, employees, managers etc. are 5% of the total unit of analyses identified from the studies. The added analysis of type of brand extension is also part of the study, which shows that majority of the researchers prefer ‘Hypothetical’ brand extensions in their research to assess the consumer evaluation or its effectiveness (65%), 35% used ‘actual’ extensions of the core brands and in 1% studies the information was ‘not given’. Similarly, the respondents have been categorized as Students, which are in majority (65%), General public (29%) and Experts/Professionals (5%). The reason behind students as a dominant respondent’s type is that the research design chosen by most of the researchers in experimental and most of the researchers being Academicians find it convenient for their researches to choose the students as their respondents. To choose students as a sample makes it easier for them to locate the respondents even if they have to repeat the experiment for some reason. The mostly used sample size range in the experiment is 101-300 (80%) which is a convenient sample size for the academicians to get from even a small or mid-size university anywhere in the world in one time. This conclusion is matching the results of this study also. As respondents are basically students, the country data collection is the same as of researchers; therefore, no analysis is included on the basis of ‘country of data collection’.

Cross tabulation results in the Methodological trend analysis

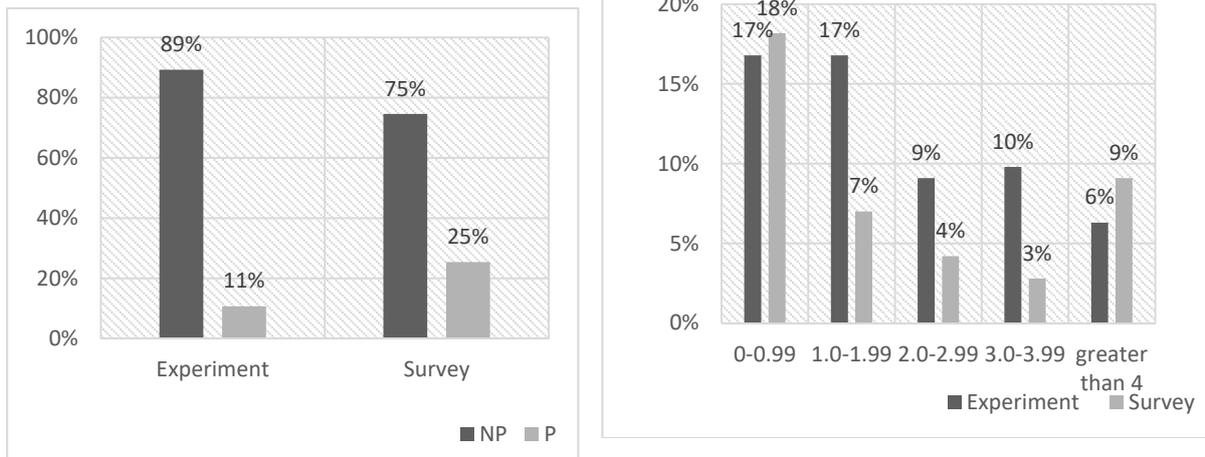
This section includes the results of all the above mentioned analysed variables with reference to time, region or both. It also contains the analysis of the interesting results when the variables are cross tabulated among themselves.

No matter the research design is experiment or survey; the non-probability sampling techniques are used (Figure 7a). The high impact factors prefer the experimental design for publishing (Figure 7b), but the impact factor greater than 4.

In all the regions, from 1990 to 2000 decade, a clear increase can be seen in the experimental design category. (Figure 8)

The increased sample size increase the credibility of the study, ease the process of generalizability, increase the robustness of the research, increase the power of statistical tests applied in the research and also decrease the errors in the measurement of the different statistics as the difference between population parameter and the sample statistic decrease with the increase in the sample size.

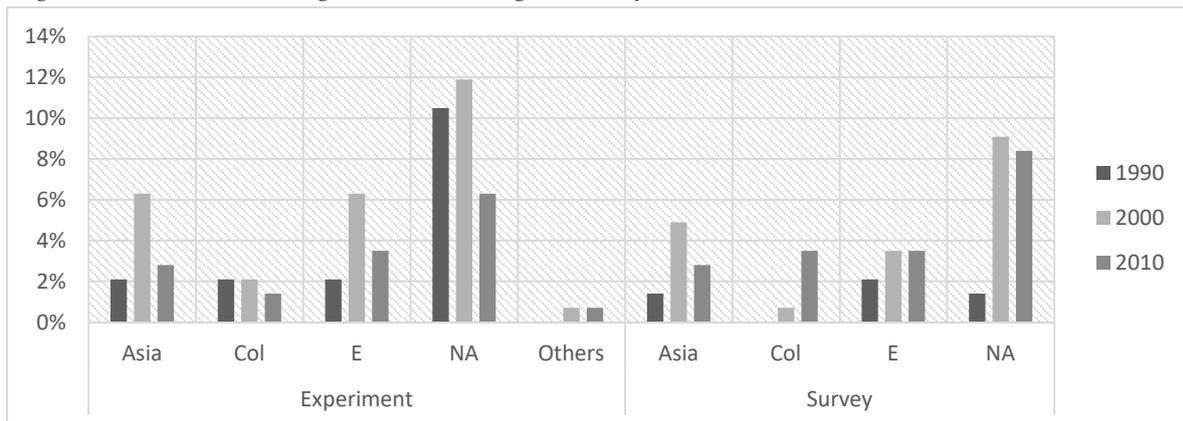
Figure 7a: Research design and sampling techniques Figure 7b: Research design and impact factor of journals



The sample size region wise and time wise shows no unexpected results, in all the regions sample size remained to be 101-300, and in 2000 decade both the ranges i.e. from 101-300 and 301-600, shows the highest percentages. Figure 9a, 9b.

The analysis in this study, on the sample size range with the sampling method shows that as far as non-probability sampling methods are concerned; 101-300 sampling range is preferred but for probability sampling the sampling range preferred is 301-600. (Figure 10)

Figure 8: Research design with time-region analysis.



The further analysis has been conducted on the statistical techniques used in the chosen domain. The distribution of statistical and the analysis on the top statistical techniques shows that the use of simple techniques like descriptive (18%), z or t test (16%), ANOVA (31%) and the linear or multiple regression analysis (14%). No advanced, new and emerging techniques have been used in the past decades. In the present decade, some researchers are inclined towards using MANOVA and Structural Equation modelling (SEM) each found to be 3% of the total techniques used. (Figure 11).

Figure 9a: Sampling range time wise

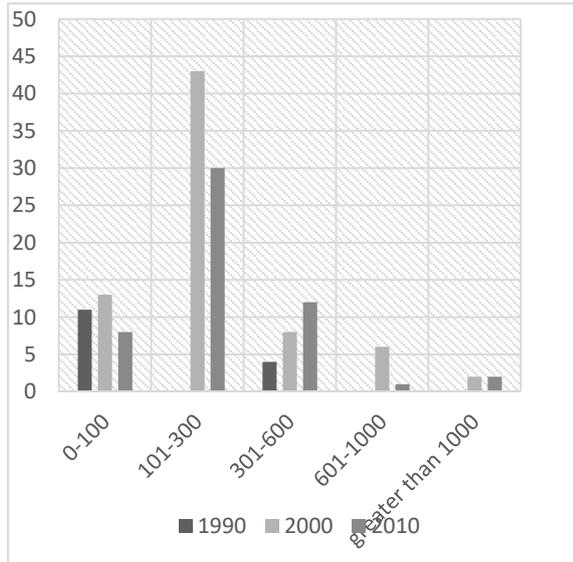


Figure 9b: Sampling range region wise

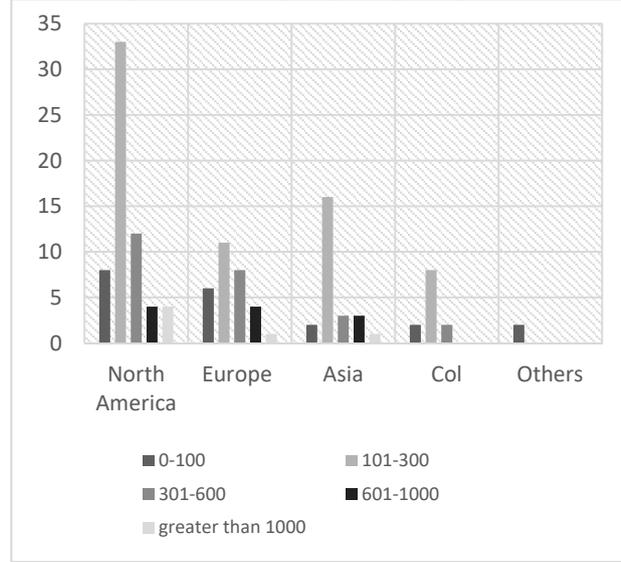
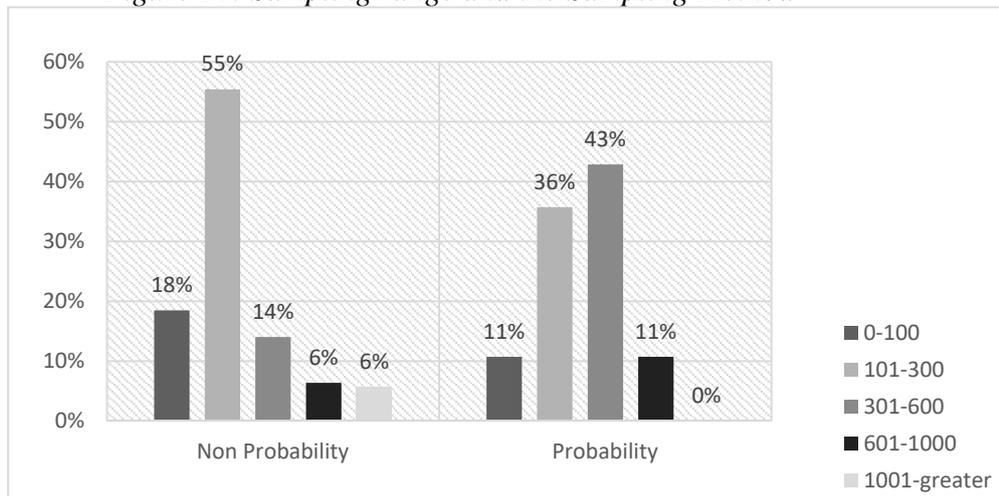


Figure 10: Sampling range and the Sampling Method

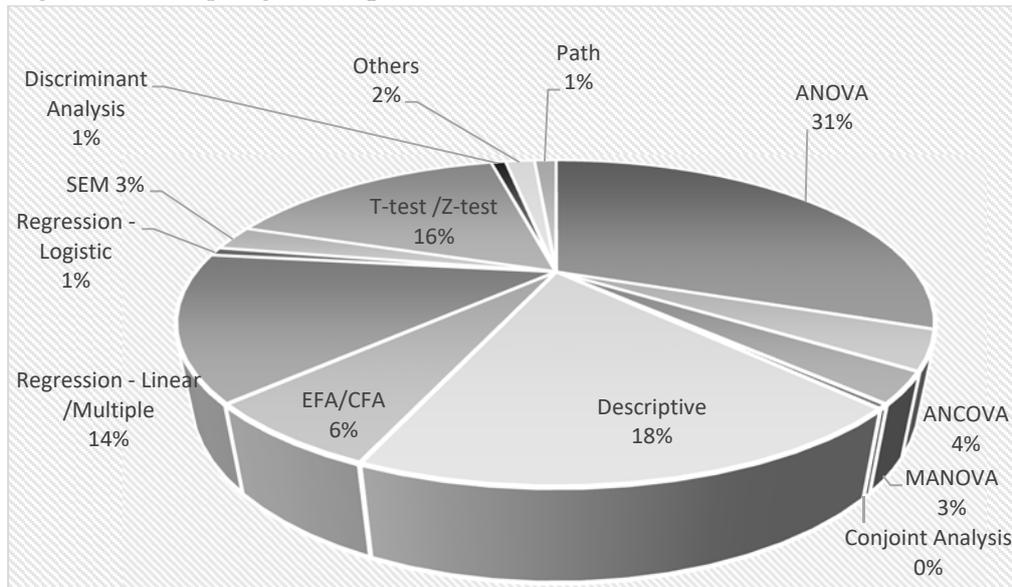


The statistical techniques can be divided into three basic categories according to the variables used in the analysis; univariate, bivariate and multivariate techniques. Univariate data analysis examines one variable at a time. It is descriptive in nature. Summary counts, measures of central tendencies, like arithmetic mean, geometric mean etc. and the measures of location like variance and standard deviation, are included in univariate analysis. The bivariate analysis includes linear correlation and regression analysis, ANOVA and other methods of inferential statistics. On the other hand, the inclusion of more than two variables makes it a multivariate analysis. The multiple regression and correlation, discriminant analysis, logistic regression, path analysis and SEM are some of the examples.

Keeping in mind the above facts, according to this study, univariate analysis (18%), bivariate (65%) roughly and the remaining (17%) is multivariate analysis.

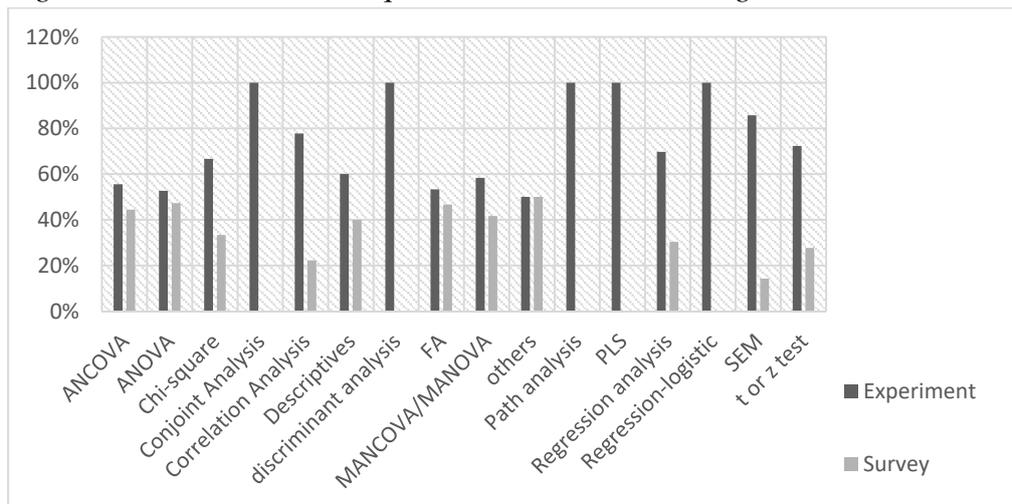
One more aspect of analysis on statistical techniques led to some interesting results, when analysed with research design. Different and sophisticated techniques to further test the reliability and validity of the experimental design are used in the brand extension domain. The techniques like conjoint analysis, discriminant analysis, logistic regression analysis and the path analysis can be seen in the experiments. (Figure 12).

Figure 11: Sampling techniques Distribution



In the industrial analysis, it can be seen that the brands are extended in the consumer goods industry the most. The consumer goods (FMCG) contain all the goods which are in personal usage of the consumers.

Figure 12: Statistical Techniques and the Research Design

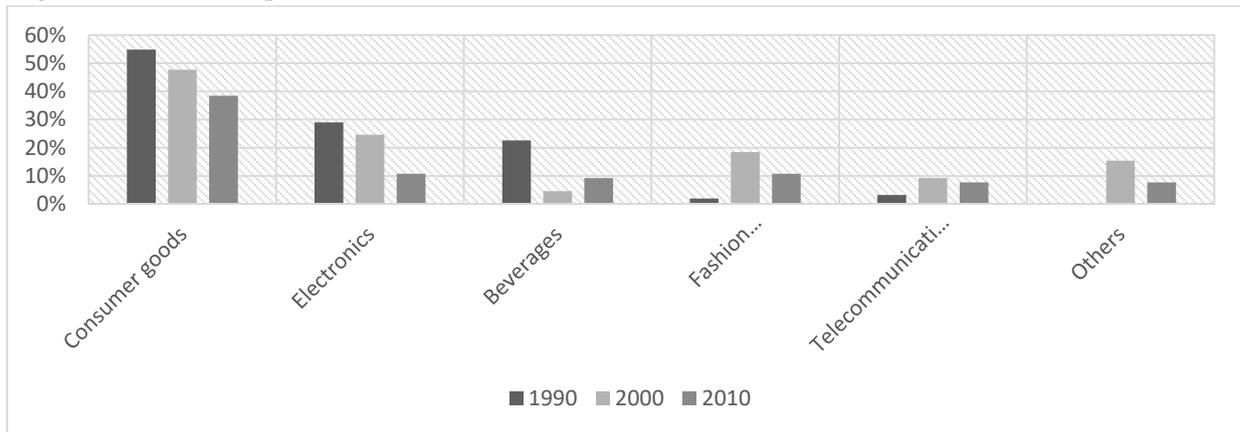


The other industries are beverages, fashion accessories, electronics and telecommunications. The distribution can be seen in Figure 13 a. The trend shows that there is an increase in using the fashion brand accessories and telecommunication as the extended brand time wise. In terms of region consumer goods are used extensively in all the regions especially Europe. In North America and Asia, fashion accessories and Beverages are popular for brand extensions. (Figure 13 b)

Publication Trend Analysis:

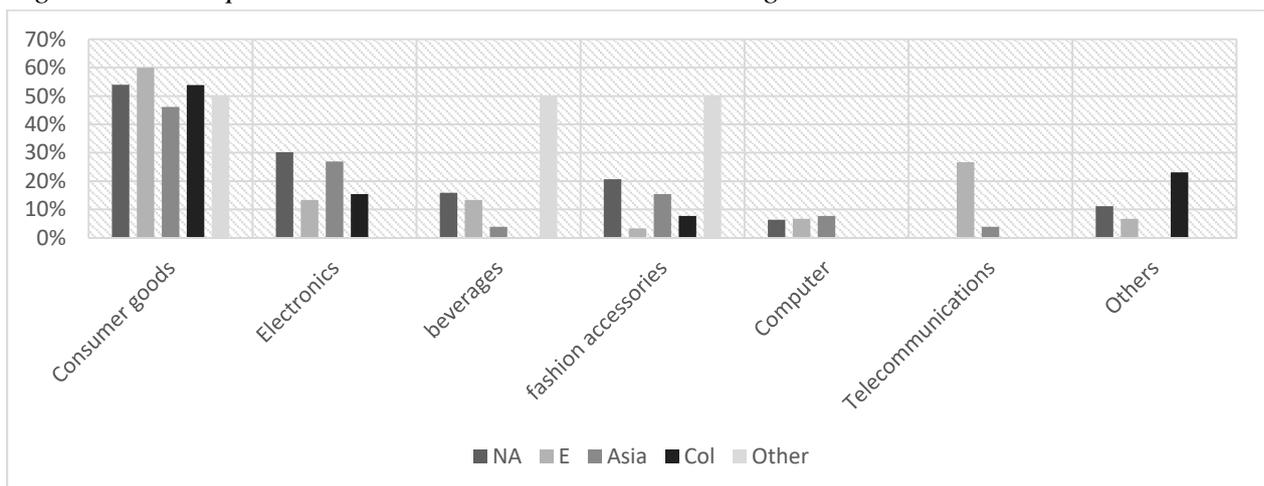
This section provides the results of the publication trend analysis in the domain of brand extensions literature. The publication trend analysis includes the authorship information like number of authors, their universities, and authorship collaboration. Further the journals in which the articles are published. The identification of the most published authors and the journals with most publications and the university data analysis facilitating the authors ding most of the publication in the field chosen for this study.

Figure 13 a: Five top industries used in brand extensions with time



For this trend analysis, all the relevant articles which came up in the search, in the Business Source Complete database, which totals to 192, are included in the analysis. The relevant articles include all types of articles and are not restricted to empirical quantitative. The time span on which these articles are spread is of 42 years i.e. from 1972 to 2014.

Figure 13 b : Top 5 industries used in brand extensions region-wise.



Authorship analysis:

There are different types of researches seen as far as authors are concerned. The literature this study has covered has seen only three; a) Academicians (93%), b) practitioners (6%) and c) collaboration between academicians and the practitioners (2%). (Figure 14 a)

This small amount of practitioners working in the domain of brand extensions all belong to North America. There are no practitioners from Europe or Asia. Collaboration is among European and Asian authors or the North American and the European authors. It may be due to the reason that the cross cultural settings and environment can be portrayed and examined very easily. (Figure 14 b)

It is apparently observed that the practitioners, though they are closely related with the actual process of extending the brand, are not interested in transferring their experiences and thoughts on the paper. There are very less practitioners identified in the relevant articles.

There seems to be a lack of congruence between the academicians and the practice in the field of brand extensions. This is discussed in the following words, “While some academic disciplines seem to be able to coast along quite well without any particular thought to practitioner concerns, apathy of this nature portends catastrophic consequences for public administration theory, education, and practice.”(Bolton & Stolics, 2003).

On the other hand, the reason may be that all the articles taken are from the academic journals and practitioners may not want to publish their work in the academic journal. In other disciplines, like direct marketing (Schultz,1987), human resource management, public administration (Bolton and Stolics, 2003) and other such disciplines there is lack of congruency and the research agenda to help the practitioners solve their problems. In the region-time analysis, keeping in mind that the last time period consists of only 5 years, the academic researchers are on the rise all over the regions. Similarly the authors are collaborating inter regionally also to produce the effective and more meaningful researches. (Figure 14 c)

Figure 14a: Distribution of the authorship

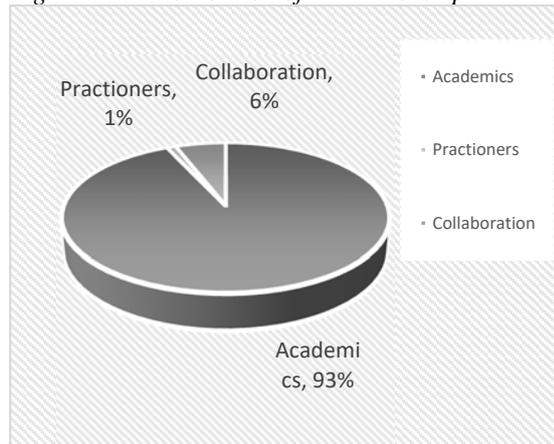
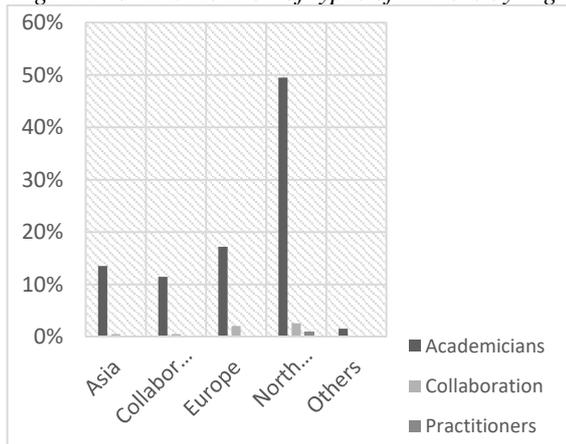


Figure 14b: Distribution of types of authors by region.



One more analysis done in this study is the authors per study analysis. The single author's studies are being reduced in comparison to the two or three authors' studies. This is happening as it is the trend of the day. Every author has his or her own expertise. The authors, searching and researching new arenas in the different fields, are collaborating regionally and inter-regionally to adopt the expertise of other authors. The increase in the number of international academic conferences all over the world has provided the researchers new platforms to get to know about each other and their expertise.

According to many researches, the more appropriate way to stipulate the contribution of the author is not mention the 'direct appearances', but to measure it in terms of 'adjusted appearances'. Adjusted appearances are calculated by the formula of:

$$\text{Adjusted Appearances} = 1/n$$

Where n is the number of authors of the study.

The top authors in the field of brand extensions have been identified in the Table 2. In which the adjusted appearance is measured by the weighted mean of the authors.

This table reveals that the highest adjusted appearance is of 3.0 among the top 23 authors, and the lowest is 0.83. The top three authors are Deborah Roeddder John (University of South Carolina), Daniell C. Smith (Norwegian School of Economics and Business) and Keller, Kevin (Stanford University).

This can be helpful for the doctoral students and future new researchers if they want to seek mentorship, guidance or collaboration with these prestigious authors.

University analysis

University analysis is helpful again for the doctoral students and the new researchers to know about the place where to look at, if they are interested in doing their thesis in this particular field. It is also helpful for the academicians for the reason that by identifying the top universities in any domain they can identify where to look for collaborations in terms of expertise or enhancing their concepts.

Figure 14 c: Distribution of authorship region-time wise

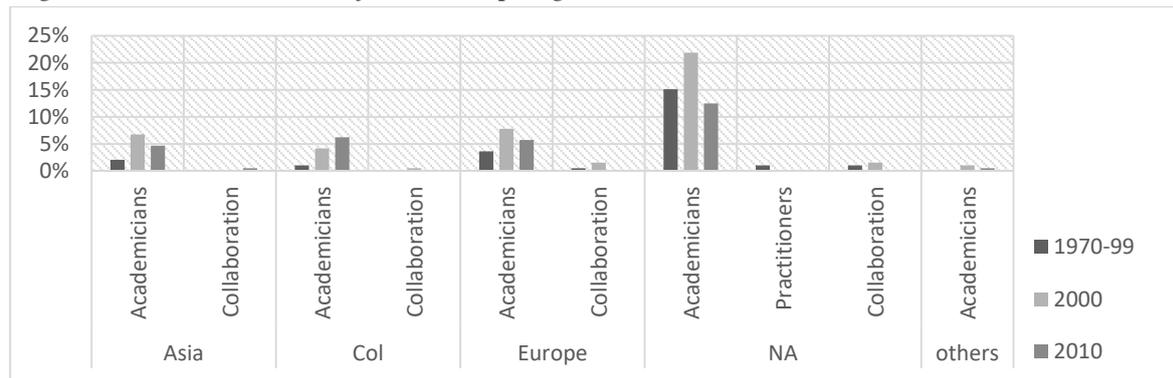


Table 3 is explaining the top universities appeared in the selected samples. They are ranked by their adjusted appearances, calculated by the same formula mentioned above i.e. $1/n$ where n is the number of universities.

This shows that the Norwegian School of Economics and Business may appear the most number of times in simple appearances but the University of Minnesota has got the highest adjusted appearance of 5.33.

Table 2: Top authors and their adjusted appearances in Brand Extension Analysis

ID	Row Labels	Number of times Author appeared in the Articles	Adjusted Appearance
1	John,Deborah Roedder	6	3
2	Smith,Daniel C.	4	3
3	Keller,Kevin Lane	5	2.83
4	Hem,Leif E.	6	2.52
5	Park,C. W.	7	2.48
6	Pina,Jose M.	5	2.41
7	Milberg, Sandra	6	2.35
8	Park,Jongwon	3	2.16
9	Monga,Alokparna Basu	4	2
10	Taylor,Valerie A.	3	2
11	Barone,Michael J.	3	1.83
12	Sood,Sanjay	3	1.83
13	Sattler,Henrik	4	1.75
14	Bridges,Sheri	3	1.66
15	Loken,Barbara	3	1.5
16	Aaker,David A.	3	1.5
17	Iversen,Nina M.	6	1.41
18	Volckner,Franziska	4	1.33
19	Echambadi,Raj	4	1
20	Bottomley,Paul A.	3	1
21	Gierl,Heribert	3	0.83
22	Schmitt,Bernd H.	3	0.83
23	Nkwocha,Innocent	3	0.83

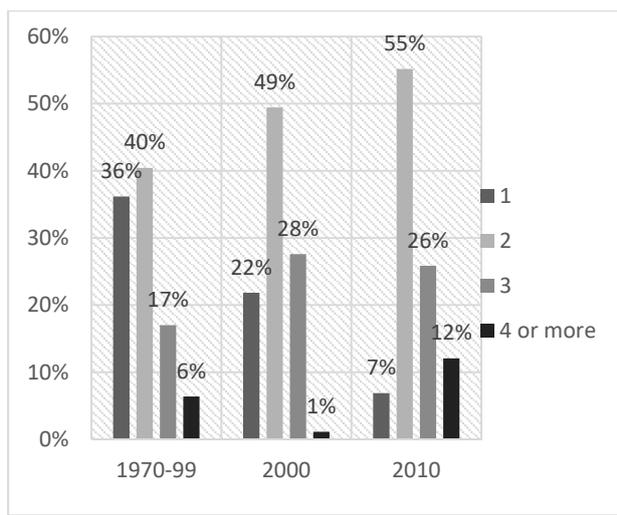


Figure 15: Authorship type and number of authors.

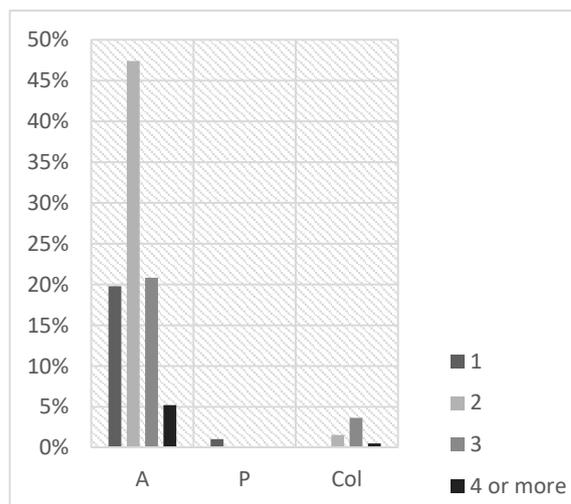


Figure 16: No of authors' time wise

Table 3: Top University Appearances in Brand Extensions

S.no	University	Total No. of Appearances	Region	Adjusted Appearances
1	University of Minnesota	11	NA	5.33
2	University of Southern California	10	NA	4.14
3	University of Florida	6	NA	4
4	Norwegian School of Economics and Business Administration	12	Europe	3.8
5	University of Georgia	7	NA	3.16
6	Indiana University	7	NA	3.08
7	Korea University	8	Asia	2.82
8	University of Hamburg	6	Europe	2.49
9	University of Pittsburg	6	NA	2.49
10	The Hong Kong Polytechnic University	8	Asia	2.29
11	Georgetown University	5	Europe	2.02
12	Maastricht University	4	Europe	2
13	Griffith University	4	Europe	1.83
14	University of Cincinnati	4	NA	1.75
15	Facultad de Ciencias Económicas y Empresariales,	4	Europe	1.66
16	University of Arizona	4	NA	1.32
17	University of Cologne	4	Europe	1.16
18	Universidad Adolfo Ibañez	4	Europe	1

The top three universities in terms of adjusted appearances are University of Minnesota (North America), University of Southern California (North America) and Norwegian School of economics and Business (Europe). There are only two Asian universities i.e. Korea University (2.82) and The Hong Kong Polytechnic University (2.29), included in the list.

Publications in Journals

The trend analysis of different journals for publications in any domain, gives a strong signal to the new researchers and the doctoral students wishing to get their work published. They came to know where to send their work in which domain to get it published. Out of 55 journals used all over in the study; Advances in Consumer Research (14%), Journal of Marketing Research (8%), Journal of Business Research (7%), Journal of Brand Management (6%), and Psychology and Marketing, Journal of Consumer Research, Journal of Marketing and Marketing Letters all 5% each, these eight journals totals up to 55% of the total publications.

Table 4 also contains the impact factor of the top journals, along with the percentages of publication. The top eight journals other than the 'Advances in Consumer Research' have impact factor ranging from 0.67 to 5.47.

Table 4: Top Journal Names, Their Percentage of Publications And Impact Factors

S.No	Journals	Percentage Publications	Impact Factor
1	Advances in Consumer Research	14%	0
2	Journal of Marketing Research (JMR)	8%	2.52
3	Journal of Business Research	7%	1.872
4	Journal of Brand Management	6%	0.67
5	Psychology & Marketing	5%	1.267
6	Journal of Consumer Research	5%	3.1
7	Journal of Marketing	5%	5.47
8	Marketing Letters	5%	0.78
9	Journal of the Academy of Marketing Science	3%	3.410
10	Journal of Consumer Psychology (Lawrence Erlbaum Associates)	3%	0
11	International Journal of Research in Marketing	3%	1.79
12	Management Science	3%	2.524
13	Journal of Marketing Management	3%	0
14	Marketing Management Journal	2%	1.14
15	Journal of Retailing and Consumer Services	2%	0
16	Journal of Consumer Psychology	2%	1.708
17	Australasian Marketing Journal (AMJ)	2%	0.82
18	Sport Marketing Quarterly	2%	0
19	Journal of Business & Retail Management Research	1%	0
20	IUP Journal of Brand Management	1%	0

Table 5 consists of in-depth analysis of the journals region and time wise in the form of a cross tabulation. The table shows the percentages of the top ten journals publishing in the field of brand extensions based on the origin of the author.

As was expected the highest number of publications are in the region of North America as most of the journals are from NA, clarifying the trend that the authors will prefer those journals to publish their work. On the other hand, the journals will also prefer to the local authors instead of foreign ones. Out of the top journals, containing 55% of the studies in the sample, only one journal is European.

Citation Analysis

When one has to evaluate the research findings and the quality of the research, one of the good measures is to find out the citations of the research. Citation is defined as , “the number of times the article’s reference is used in other researches”. For this article Google Scholar has been used to find out the citations of the articles included in the sample.

TABLE 5: Top Journals (more than 5% publications) region wise.

Journals having Publications (> 5%)	Highest Region of the Journal	By Region (frequency)			By Region (percentages)		
		North America	Europe	Asia	North America	Europe	Asia
Advances in Consumer Research	NA	17	6	3	17%	16%	11%
Journal of Marketing Research (JMR)	NA	3	8	2	3%	22%	7%
Journal of Business Research	NA	8	1	2	8%	3%	7%
Journal of Brand Management	E	4	4	3	4%	11%	11%
Psychology & Marketing	NA	5	0	2	5%	0%	7%
Journal of Consumer Research	NA	0	0	0	0%	0%	0%
Journal of Marketing	NA	7	0	1	7%	0%	4%
Marketing Letters	NA	2	3	3	2%	8%	11%

Moed (2006) in his book, "Citation analysis in research evaluation." states that "citation analysis is the construction and evaluation of the series of indicators impact, influence and quality of scholarly work derived from citation data."

The citation can also depend upon the number of years it has been published. Again, the greater the number of years the article has been published the greater the citation may be. For example an article which is published in 1990 may have more citation than an article published ten years just because the reason that it has been published before.

For the sample, the citation ranges from 0 to 2787. But due to the problem mentioned above, instead of the actual citations, another measure which is citation per year is calculated. The formula for citation per year is simple i.e. citation of the article / number of years the article has been published.

This seems to be the better measure as it incorporates the number of published years of the articles, thus solve the above problem. It also helps the researchers to identify the most prominent and leading researches in the field. The highly cited articles also reveal the most important topics in the domain, in this case brand extensions.

Table 5 includes the top 25 articles of the chosen sample, actual citations, year of publications and the citation per year. The top five papers having the most number of citations per year are Aaker and Keller (1990), Aaker and Keller (1992), Broniarczyk and Alba (1994), Park, Milberg and Lawson (1991) and Volckner and Henrik (2006).

Most of the articles i.e. 21 out of 30, mentioned in the table 11 are published in very influential journals having high impact factor.

Discussion

Brand extensions are appealing to corporations who have the complete knowledge of the fact that failure rates of the new product are high due to the reason that they provide a way to take advantage of brand name, brand strength and brand impact to enter new markets. The influence of a brand which is strong in nature, then its name can reduce the risk of introducing a product in the new markets the corporations want to enter. It also provides the consumers knowledge of the brand. Other than that, the increase in cross cultural brand introductions has led to new kinds of risks and returns for every firm. This cultural diversity creates strategic opportunities for marketers desiring to target different ethnic consumers. These ethnic

TABLE 6: Top cited Articles in Brand Extensions

S.No	Authors, Primary	Periodical Full	Title Primary	Pub Year	No of citations	Citations per year
1	Aaker and Keller	Journal of Marketing	Consumer Evaluations of Brand Extensions	1990	2787	116.13
2	Aaker and Keller	Journal of Marketing Research (JMR)	The Effects of Sequential Introduction of Brand Extensions	1992	1169	53.14
3	Broniarczyk and Alba	Journal of Marketing Research (JMR)	The Importance of the Brand in Brand Extension	1994	958	47.90
4	Park, Milberg and Lawson	Journal of Consumer Research	Evaluation of Brand Extensions: The Role of Product Feature Similarity and Brand Concept Consistency	1991	1101	47.87
5	Volckner and Henrik	Journal of Marketing	Drivers of Brand Extension Success	2006	381	47.63
6	Boush and Loken	Journal of Marketing Research (JMR)	A Process-Tracing Study of Brand Extension Evaluation	1991	871	37.87
7	Loken and John	Journal of Marketing	Diluting brand beliefs: When do brand extensions have a negative impact?	1993	728	34.67
8	Hou, Jianwei	Marketing Management Journal	Brand Extensions: what do we Know?	2003	326	29.64
9	Klink and Smith	Journal of Marketing Research (JMR)	Threats to the External Validity of Brand Extension Research	2001	352	27.08
10	Dacin and Smith	Journal of Marketing Research (JMR)	The Effect of Brand Portfolio Characteristics on Consumer Evaluations of Brand Extensions	1994	504	25.20
11	Bottomley and Holden	Journal of Marketing Research (JMR)	Do We Really Know How Consumers Evaluate Brand Extensions?	2001	326	25.08
12	Lane and Jacobson	Journal of Marketing	Stock market reactions to brand extension announcements: The effects of brand attitude and..	1995	438	23.05
13	Urban, Carter, Gaskin, Steven and Mucha	Management Science	Market Share Rewards to Pioneering Brands: An Empirical Analysis and Strategic Implications	1986	620	22.14
14	Monga and John	Journal of Consumer Research	Cultural Differences in Brand Extension Evaluation: The Influence of Analytic versus Holistic Thinking	2007	150	21.43
15	Swaminathan, Fox and Reddy	Journal of Marketing	The Impact of Brand Extension Introduction on Choice	2001	275	21.15
16	Balachander and Ghose	Journal of Marketing	Reciprocal Spillover Effects: A Strategic Benefit of Brand Extensions	2003	225	20.45
17	Bhat and Reddy	Journal of Business Research	The impact of parent brand attribute associations and effect on brand extension evaluation	2001	265	20.38
18	Barone, Miniard and Romeo	Journal of Consumer Research	The Influence of Positive Mood on Brand Extension Evaluations	2000	256	18.29
19	Monga, Alokparna and John	Journal of Marketing	What Makes Brands Elastic? The Influence of Brand Concept and Styles of Thinking on Brand Extension Evaluation	2010	71	17.75
20	Batra, Lenkanf Wedel	Journal of Marketing Research (JMR)	Brand Extension Strategy Planning: Empirical Estimation of Brand "Category Personality Fit and Atypicality	2010	70	17.50
21	Loken and John	Advances in Consumer Research	The Negative Impact of Extensions on the Brand	1992	376	17.09
22	Martinez and Pina	Journal of Business Research	Modeling the brand extensions' influence on brand image	2009	83	16.60
23	Gurhan-Canli and Maheswaran	Journal of Marketing Research (JMR)	The Effects of Extensions on Brand Name Dilution and Enhancement	1998	262	16.38
24	Bridges, Keller and Sood	Journal of Advertising	Communication Strategies for Brand Extensions: Enhancing Perceived Fit	2000	229	16.36
25	Ahluwalia and Gurhan-Canli	Journal of Consumer Research	The Effects of Extensions on the Family Brand Name: An Accessibility-Diagnosticity Perspective	2000	216	15.43

crossovers brand extensions mingle two distinct cultures which are represented by the brand in comparison to the extension product category, which increases the role of consumers' cultural identity.

The lack of advanced statistical techniques is one of the findings of this study, but the introduction of the new statistical techniques is the trend that can be seen. This can be remedied with the use of more advanced software's like MATLAB, SPSS etc.

One other thing that can be seen in the results is the issue of less sample size. i.e. 101-300 range. This can be problematic for a number of reasons; less reliability of the study, power of the test is lower, the sampling error can be greater etc.

The use of the students as the respondents can be a disturbing phenomenon. The students as respondents have less reliability, as compared to other type of respondents like general public and experts/ professionals. This and other biases in the research design can be eradicated with the manipulations in the laboratory experiments. This may not completely eradicate them but can minimize the effects of these biases.

The use of experiments as a research design keeps the control in the researcher's hand. If something goes wrong, the experiment can be repeated as compared to the survey based researches. There is no issue of the non-response bias. It's always easy and less costly to conduct the experiment as compared to survey. The lack of practitioner in the midst of researchers is another alarming issue revealed in this study. This can create the lack of congruency between the actual problems which need to be solved and the research been done in the market.

The trend in number of authors is moving towards two to three authors from the single author's researches. This may increase the concept of collaboration within and among different regions.

Conclusions and Future Research Opportunities:

The lack of content analyses and the literature review in the field proves that there is a dire need of content analysis in the discipline of brand extensions. The one literature review found, only fenced around the data for the last decade of the 20th century. It consists of conceptual framework made of the identified major phenomena present in the literature.

This study uses not only counts and percentages but also analyse the advanced cross tabulation done on the important aspect of the findings.

The results found have a number of implications for the researchers, practitioners and the counsellors of brand extensions discipline.

- i) Due to the nascent nature of the brand extension research, many issues are still unresolved. Among them, there is the issue of the brand extension evaluation process by the consumers. This process of inference and conclusions should include different psychological and behavioural theories, like social identity theory and social choice theory.
- ii) The lack of mixed method techniques can also be taken as a new research technique.
- iii) Similarly, advanced statistical techniques and triangulation research design and techniques both can be considered and taken as research opportunity.
- iv) As most of the researches are from North America, the data collected mostly belong to that region, therefore it can be said that there is a need to broaden the horizon and collect data from all over the world. The Asian markets are the thing of tomorrow, as most of the developed countries having high factors of production costs and high technical costs are prone towards out sourcing both products and services to the new cheaper markets. Asian, both middle eastern and far eastern states are their targets. For this particular reason, the consumers of this region are developing their sense of decision and evaluation, leading to being target of researchers more and more.

- v) There is also a need of more longitudinal studies as most of the studies observed are cross sectional. This will lead to researchers thinking brand extensions as a long term phenomena rather than short term.

Limitations

There are certain limitations of this like every other study. The current research work only consists of the 55 journals belonging to the disciplines of Marketing, Business and Economics. Other than that, this study only reviews the articles which are empirical quantitative in nature, the other three types; empirical qualitative, conceptual qualitative and conceptual quantitative are not included in the current research. These two limitations may slightly undermine the credibility and reliability of the findings of this study.

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