ROLE OF FACTORING SERVICE IN SHORT-TERM BUSINESS FINANCING: A CROSS COUNTRY ANALYSIS

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ABSTRACT

It is focusing on to study trends of factoring service at world, developing countries and developed countries level by using basic as well as stylized research techniques. The paper use growth rate, growth index, year-on-year growth rate, ranking method and dominance technique for analyzing trend of factoring services across the countries. The period of study is 1998-2016. The importance of factoring has been gaining importance not only in developed countries but also in developing countries such BRICS countries during industrialization period. However, there is marginal fall in dominance of developed countries and increase of share of developing countries share in world factoring volume. There should be a more uniform policy environment for factoring services which facilitates and promotes a greater participation by all countries in different countries groupings and within each country grouping.

Key words: Factoring, Factoring Chain International, Export-Import, Dominance.

INTRODUCTION

With growing industrialization and consequential growth in the volume of industrial production and sales, timely collection and efficient management of receivable has assumed importance. At the same time, the economy has been turning into a buyers' market which leads to delay in collection, causing working capital and other problems. Such delay affects the smaller suppliers more acutely because of their limited capacity to raise resources. The

factoring, as advanced and alternative model, is offered as one possible solution for overcoming the current lack of liquidity and delay in collection of debts of the client's company and to improve the competitiveness. Factoring is a contemporary and specific form of short-term financing based on the selling short–term unsecured assets of the company to a specialized financial organization or company that specializes in factoring (factor) has to pay certain fees or charges (Ivanovic, Baresa, and Bogdan, 2011).

Factoring is a financial process where a specialized firm purchases from its clients the trade debts or accounts receivables arising from the sales of goods or the provision of services to trade customers. The customer of the client firm becomes the debtor of the factor and thus,has to pay the factor directly. The factoring company assumes the credit risk, sales ledger administration and collection for the accepted accounts and maintains all necessary records in order to collect debts purchased. The process can be considered as a form of short-term financing that can potentially improve the working capital positions and alleviate the cash-flow problems of businesses. Factoring is not a loan and there are no additional liabilities on the firm's balance sheet, although it provides working capital financing. Factoring is a comprehensive financial service that includes credit protection, credit management, accounts receivable book-keeping, collection services and financing. Factoring can be formally defined as an agreement between the factor and the seller, where the former: (1) provides a computerized sales ledger service (credit management function); (2) may assume the responsibility for the debtor's financial ability to pay (warranty function) and (3) provides credits in advance (up to 80%) of the total sales invoices offered for factoring (credit facility function). The basic activities of credit management and collection function are joined by other complementary activities such as the guarantee function and/or the financing function.

The global pattern of factoring suggests that it may have an advantage compared to other types of lending, such as loans collateralized by fixed assets, under certain conditions. Factoring appears to be a powerful tool in providing financing to high-risk informationally opaque sellers. Its key virtue is that underwriting in factoring is based on the risk of the accounts receivable themselves rather than the risk of the seller.

Factoring is used in developed and developing countries around the world. In some developed economies such as the United States, its importance as a primary source of

working capital finance tends to be concentrated in selected industries. In other developed economies, its importance as a primary source of working capital appears to be much more widespread. The global pattern of factoring suggests that it may have an advantage compared to other types of lending, such as loans collateralized by fixed assets, under certain conditions. Factoring is quite distinct from traditional forms of commercial lending where credit is primarily underwritten based on the creditworthiness of the seller rather than the value of the seller's underlying assets. In a traditional lending relationship, the lender looks to collateral only as a secondary source of repayment. The primary source of repayment is the seller itself and its viability as an ongoing entity. The development of factoring concept in various developed countries of the world has led to some consensus towards defining the term. Factoring can broadly be defined as an arrangement in which receivables arising out of sale of goods/ services are sold to the "factor" as a result of which the title to the goods/services represented by the said receivables passes on to the factor. Hence the factor becomes responsible for all credit control, sales accounting and debt collection from the buyer(s).

Factoring may also be particularly attractive in financial systems with weak commercial laws and enforcement. Like traditional forms of commercial lending, factoring provides small and medium enterprises (SMEs) with working capital financing. However, unlike traditional forms of working capital financing, factoring involves the outright purchase of the accounts receivable by the factor, rather than the collateralization of a loan.

LITERATURE REVIEW

Ivanovic, Baresa, and Bogdan (2011**)** factoring, as an alternative sources, is a model of financing and payment and financial liabilities through factoring, which allows companies to achieve liquidity and solvency. Using this alternative funding instrument, business subjects are enabled to continue business cycle, and enhance liquidity, performances and business growth in simple and relatively quickly way. Various modalities of factoring provide to companies a flexible attitude towards our business partners in terms of financing. Ana-Maria Hlaciuc and Radu Bores (2016) factoring has grown increasingly more both globally and nationally and internationally and has attracted the attention of several international organizations that were involved in this. Leora Klapper (2005) stated that factoring is larger in countries with greater economic development and growth and

developed credit information bureaus. Soufani, Khaled (2000). The tests focus on establishing a profile of borrowers, based on firm's demographic characteristics such as age, turnover, industry, and type of legal ownership. The paper find evidence that each is an important determinant in firms' choice of factoring as a source of finance for working capital and an instrument to cash flow improvement but it is a financial option that is not universally available. Kohnstamm (1999) has considered America and Europe as mature market, Asia Pacific region as tire most dramatic growth area and tire rest of the world as the beginning of a probable factoring boom.

The existing literature mainly focused on overall theoretical concept of factoring, its mechanism, evaluation of factoring as an efficient, viable and alternative source of financing to the small and medium enterprise (SMEs) for meeting the need of working capital and smooth running of business activities without incurring additional external liabilities. There are a few existing literatures which focused on comprehensive study of factoring financial services covering trend and pattern of factoring, dominance of factoring. There are also a few existing literature which focused on the empirical study of trends and patterns of factoring service in different grouping countries such as World level, Developed Countries and Developing Countries. This literature gap is main motivation for taking up this topic for the study.

OBJECTIVES OF THE STUDY

Considering the literature gap, the study would undertake to achieve the following objectives:

1. To study theoretical concept of factoring service

2. To study trends of factoring service in developing countries and developed countries.

3. To analyse pattern of dominance of factoring service in developing countries and developed countries.

HYPOTHESES

As we have mentioned in the above stated objectives, our empirical work will be carried out at the macro level and accordingly, we can broadly form the following hypotheses:

1. There has been a decline in factoring business.

2. Factoring business is not increasing towards developing countries.

3. Dominance pattern of factoring business has not changed.

RESEARCH METHODOLOGY

Data Sources: the study will use data on total factoring turnover from Factor Chain International. The study will classify data in three different countries grouping such as world level, developed countries and developing countries. The period of study is 1998-2016.

Growth Rate

We use a set of semi-log growth equations to measure compound annual growth rate (CAGR) over the periods. Time factor represents policy and general factors that influence overall factoring services in India, Asia and world. This enables the measurement of rate of growth through time series analysis during 1998-2016. Rate of Growth (CAGR) is measured for India, Asia-Pacific and the World over time. Adjusted R square measures the influence of time on the factoring services. P-value represents the level of significance. The growth equation is

$Factoring = e^{a+bT}$

Taking log of both sides and adding error term

$Log(Factoring) = a + BT + u_t$

$\quad\quad$ 'a' = intercept; 'b' = annual exponential growth rate; 'u' = error term

$\quad\quad$ 'T' = 1998, 1999, …………………………………………………..2016.

Growth Index

Growth Index of Factoring means growth of factoring turnover with respect to base year

factoring turnover. Growth index can be estimated with the help of the formula given below:

$$GI_{Factoring} = \frac{F_t}{F_b} \times 100$$

GIFactoring = Growth index of Factoring Turnover

F_t = Factoring Turnover at t year

F_b = Factoring Turnover at base year

Base year = 1998

t = 1998, 1999, 2000................., 2016.

Year on Year Growth Rate

The growth of factoring volume is calculated on year-on-year (YoY) basis. The growth of factoring volume on year-on-year means increase or decrease of factoring service in a particular year with respect to immediate previous year. The year-on-year growth rate is estimated with the help of formula given below.

$$YoY\ Growth\ Rate = \frac{Factoring_t}{Factoring_{t-1}} \times 100$$

$Factoring_t$ = Factoring service during current year.

$Factoring_{t-1}$ = Factoring service during previous year.

Ranking Pattern: Ranking pattern explains the changes in ranking position of a country providing factoring service during 1998 -2016. This change in the rank position of a country indicates position of that country w.r.t. other countries in term of providing factoring service.

Dominance Pattern

We have studied dominance in two ways:

1. The rankings patterns, which is a discrete measure of dominance.
2. Index of Rank Dominance (IRD) which is a relative dominance measure by ranks, (Murthy, 2011). This is measure of continuous dominance.

The index of rank dominance (IRD) is an innovative measure which tells us a coefficient that expresses the degree of dominance of an ordinal measure such as rank.

IRD has further refined as a relative- Relative Index of Rank Dominance (RIRD), which measures dominance in a relative sense. This gives the proportionate weight of the rank dominance index.

Index of Rank Dominance

Amongst the top ten countries respectively which of the country's has the dominant position (i.e. highest rank) for the longest period is estimated with the help of index of rank dominance (Bhanu Murthy, 2011).

$$I_{RD} = \frac{\sum_{i=1998}^{2016} (RankScore)_t}{MaximumRankScoreXNo.ofYears}$$

I_{RD} = is the index of Rank Dominance.

Rank Score = 10, 9, 8... (In decreasing order of rank).

There are four properties of this new index:

1. The value of lies between 0 and 1, that is, $0 < I_{RD} \leq 1$ measures in relative terms the position of the most dominant centre over period from 1998 to 2016 for factoring turnover. The value of lies between zero and one but never become zero because in this index, countries included must be at least one time be placed in the top ten positions over the period 1998 to 2016. The maximum value of shall be one provided a country has been at top position in all years from 1998 to 2016 in factoring service.

2. IRD is a measure of continuous dominance.

3. RIRD enables measuring the relative continuous dominance.

4. IRD is a measure that applies to panel data. That is it measures the dominance and amongst 'N' countries over a time periods of 'T' years.

EMPIRICAL ANALYSIS

Trends and Patterns of Factoring Services

Factor Chain International (FCI) develops uniform factoring techniques and best practices for cross-border business and helps to solve the legal, regulatory and technical issues

arising in international factoring transactions. The Factoring has grown into one of the most sought after financial services today. The industry registered over EUR 2.35 trillion in volume in 2016, and for the past 20 years has grown over 9 percent per annum on a CAGR basis.

The growth of the factoring volume which had showed a constant upward trend until 2014 has apparently stopped and the 2016 figures reported indicate that the numbers differ very little from those of 2015: EUR 2,375 billion versus 2,367. The same can be said for the Domestic and International volumes which maintained their proportions of just less than 80% and just over 20% (Table 1).

The domestic factoring includes invoice discounting, recourse factoring, non-recourse factoring and collection. The breakdown by product confirmed the shares of previous year (2015) including the "with" and "without recourse" domestic factoring where we notice again a shift towards the latter. The proportion of Non-Recourse Factoring (NRF) has continuously been higher than Recourse Factoring (RF) in domestic factoring. The ratio of Non-Recourse Factoring to Recourse Factoring (NRF/RF) is more than double in 2016, while this ratio is just more one in 2013. This implies the importance of Non-Recourse Factoring within the domestic factoring. Export Factoring and Import Factoring have been also continuously increasing during the period except in 2009 and 2016. The overall global factoring services declined in 2009 due to global financial crisis (Table 2).

Table 1: Total Factoring Volume 2006–2016 (in millions of Euros)

Particular	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
World Domestic Factoring	1030598	1153131	1148943	1118100	1402331	1750899	1779785	1827680	1857410	1838366	1868855
World International Factoring	103690	145996	176168	165459	245898	264108	352446	402798	490114	529379	507112
World Total	1134288	1299127	1325111	1283559	1648229	2015007	2132231	2230478	2347524	2367745	2375967

Source: https://fci.nl and FCI Annual Review various issues.

Table 2: Accumulative FCI Factoring Turnover (in millions of Euros)

Particular	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Invoice Discounting	193829	219914	206915	197993	204527	279113	302030	330518	299930	310313	333544
Recourse Factoring	139978	168683	167860	159037	234889	267523	306187	339644	356058	301948	236613
Non-Recourse Factoring	247818	237585	243413	242444	283198	331257	352353	344863	372115	434456	481172
Ratio of NRF/RF	1.77	1.41	1.45	1.52	1.21	1.24	1.15	**1.02**	1.05	1.44	**2.03**
Collections	12604	13934	25940	23806	23394	26018	27786	31399	40123	57725	47472
Total Domestic Factoring FCI	594229	640116	644128	623280	746008	903912	988529	1046425	1068226	1104441	1098800
Export Factoring	59302	68424	88244	75654	126032	162972	192573	219285	242472	261214	256551
Import Factoring	14944	17416	22363	17626	23584	30943	36707	50481	54081	66612	63446
Export Invoice Discounting	24179	32430	33801	40353	29818	51069	85163	87447	89025	96871	108038
Total International Factoring FCI	98425	118271	144408	133633	179434	244983	314442	357213	385579	424697	428035
Grand Total FCI	692654	758386	788537	756913	925442	1148895	1302971	1403638	1453804	1529138	1526836

Source: https://fci.nl and FCI Annual Review various issues.

Table 3: Number of Factoring Companies

Continent	2010	2011	2012	2013	2014	2015	2016
India	11	12	12	12	6	10	11
Asia-Pacific	125	164	135	157	155	121	465
Europe	592	610	732	732	695	719	694
America (North & South)	1674	1685	1502	1544	1444	1461	1595
Africa	20	18	27	19	29	20	38
Australasia	26	26	27	18	7	15	6
Total	2437	2503	2423	2470	2330	2336	2798

Source: https://fci.nl and FCI Annual Review various issues.

The total number of companies active in the Industry is estimated at around 2,800 in year 2016. This figure is slightly higher than was reported in 2015 and reflects the inclusion this year of entrepreneurial USA factors. The total number of companies active in North America and South America are more than half of total active companies. The active companies in Europe are slightly less than half of the active companies in American continent during the period (Table 3). However, there have been a handful of companies active in India. The Indian government requires providing the needed supports for the growth of factoring services in India.

The turnover of domestic factoring has been consistently growing during 2010-2016. Europe is leading in the turnover of domestic factoring and having more than 60 percent share in all these years. Europe share reached to more than two-third of the domestic factoring in 2016. The share of Asia-Pacific and America (North and South America) is 19 percent and 10 percent respectively in 2016. India has insignificant share in domestic factoring volume. India has less than one percent of domestic factoring of Asia-Pacific (Table 4).

Table 4: Domestic Factoring (Million Euro)

Continent	2010	2011	2012	2013	2014	2015	2016
India	2600	2650	3500	5000	3500	2500	3493
Asia -Pacific	266949	444828	424596	435484	391778	380380	355882
Europe	900655	1025558	1104965	1131605	1214868	1263552	1256731
America (North & South)	173065	189863	176770	176487	187703	174773	189407
Africa	16232	22988	23481	21968	20815	13383	19070
Australasia	45430	57900	49972	62137	42245	41751	47648
Total	1402331	1741137	1779784	1827680	1857410	1873839	1868855

Source: https://fci.nl and FCI Annual Review various issues.

The turnover of international factoring has been consistently growing during the period except in 2016. Europe is leading in the turnover of international factoring and having more than 50 percent share in all these years. Europe share reached around two-third of the total international factoring volume in 2016. The share of Asia-Pacific and America (North and South America) is 32 percent and 2 percent respectively in 2016. India has insignificant share in international factoring (Table 5).

Asian factoring volume, which declined by 8.46% in 2015, is suffered another decline of 8.47% in 2016 to EUR 508 billion. This was caused mainly by China, which saw a further decline of 14.5%. Japan and Taiwan, two other major Asian countries also suffered decline in volume, albeit at a lower rate 8.7% and 10.45% respectively. Notwithstanding the reduction in 2016, Asia continued to be the second largest factoring region accounting for 22% of the world factoring volume. China continued to be the world's second largest factoring country after The United Kingdom (Table 4 and Table 5).

Table 5: International Factoring (Million Euro)

Continent	2010	2011	2012	2013	2014	2015	2016
India	150	150	150	240	840	1200	388
Asia-Pacific	88528	64060	146932	163813	223216	216134	159356
Europe	144415	192253	193759	222587	247652	293323	336363
America (North & South)	12292	17309	11074	15068	18921	19334	10034
Africa	579	463	446	1155	279	104	1323
Australasia	85	191	234	175	45	10	10
Total	245898	274276	352445	402798	490114	528905	507112

Source: https://fci.nl and FCI Annual Review various issues.

Growth Rate

The growth rate (CAGR) is positive and statistically significant in all the cases. The growth rate is 15.25 percent, 15.38 percent and 10 percent in case of India, Asia-Pacific and World respectively. Factoring services has been growing at the rate of 15.25 percent per annum in India. This implies that India has potential opportunity for growth of factoring service – domestic and international factoring services. Asia-Pacific region has been showing fastest growth of Factoring services. There is a lot of scope for growth of factoring services in Asia-Pacific region (Table 6).

Table 6: Statistics of Factoring Services during 1998-2016

	Adjusted R Square	Growth Rate (CAGR)	P-value
India	0.69	0.1525	0.00
Asia-Pacific	0.93	0.1538	0.00
World	0.98	0.10	0.00

Source: Author's Estimation

Growth Index

Globalization refers to the growing interdependence of countries resulting from the increasing integration of trade, finance, people, and ideas in one global marketplace. International trade is the main element of this global integration. With increase of domestic trade and international trade, the demand for factoring services will be definitely increased. Trends of factoring can be examined with the help of growth index.

The growth index of factoring volume growth is given in the Table 7. Factoring services has increased more than 2900 percentage points in India in 2013 w.r.t the base year 1998.

Table 7: Trends of Factoring during 1998-2016

Year	India	Aisa	World	India	Aisa	World	India	Aisa	World
	Euro Million			Base Year (1998) = 100			Year-on-Year Growth Rate		
1998	174	61708	456410	100.0	100.0	100.0			
1999	257	78760	556815	147.7	127.6	122.0	47.7	27.6	22.0
2000	470	69858	623839	270.1	113.2	136.7	82.9	**-11.3**	12.0
2001	690	76088	685690	396.6	123.3	150.2	46.8	8.9	9.9
2002	1290	69872	724219	741.4	113.2	158.7	**87.0**	-8.2	5.6
2003	1615	89131	760427	928.2	144.4	166.6	25.2	27.6	5.0
2004	1,625	111519	859629	933.9	180.7	188.3	0.6	25.1	13.0
2005	1,990	135532	1016210	1143.7	219.6	222.7	22.5	21.5	18.2
2006	3560	149751	1133288	2046.0	242.7	248.3	78.9	10.5	11.5
2007	5055	174470	1300892	2905.2	282.7	285.0	42.0	16.5	14.8
2008	5200	235731	1324963	2988.5	382.0	290.3	2.9	35.1	1.9
2009	2650	210291	1283980	1523.0	340.8	281.3	**-49.0**	-10.8	**-3.1**
2010	2750	396212	1648330	1580.5	642.1	361.2	3.8	**88.4**	**28.4**
2011	2800	561371	2014978	1609.2	909.7	441.5	1.8	41.7	22.2
2012	3650	616424	2132186	2097.7	998.9	467.2	30.4	9.8	5.8
2013	5240	634441	2208372	**3011.5**	1028.1	483.9	43.6	2.9	3.6
2014	4340	648716	2347513	2494.3	**1051.3**	514.3	-17.2	2.3	6.3
2015	3700	596633	2367790	2126.4	966.9	518.8	-14.7	-8.0	0.9
2016	3881	555550	2375967	2230.5	900.3	**520.6**	4.9	-6.9	0.3

Source: https://fci.nl and FCI Annual Review various issues.

While factoring service has increased more than 900 percentage points in 2014 and 400 in 2016 percentage points for Asia-Pacific and World respectively. We have estimated Year-on-Year (YoY) growth rate of current year with respect to previous year for India, Asia and World. YoY growth rate showing that there is not consistent pattern of growth of factoring services. Maximum YoY growth is 87 percent in 2002 and minimum is -49 percent in 2009 in case of India. Maximum YoY growth is more than 88 percent in 2010 and minimum is -11.3 percent in 2000 in case of Asia. In case of World, maximum YoY growth rate is more than 28 percent in 2010 and minimum is -3.1 in 2009. Factoring service is showing negative YoY growth rate in 2009 due to impact of global financial crisis. Global financial crisis has impacted negatively for growth of factoring services (Table 7 and Figure 1).

Figure 1: Trends of Growth of Factoring w.r.t Base Year (1998) during 1998-2016
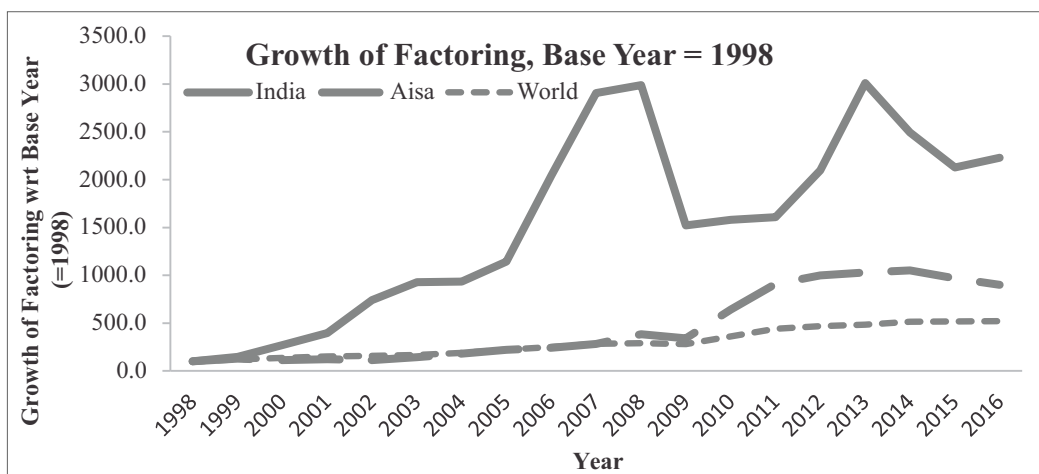
Year on Year Growth Rate

The index of factoring volume growth for five continents of the world and world as whole is given in the Table 6.8. The world highest factoring growth is 28.38 per cent in 2010 w.r.t 2009 just after financial crisis. The trend of growth of world factoring growth has been showing positive and increasing since after financial crisis. However, the impact of financial crisis can also be seen on factoring service in 2009. World factoring volume growth is declined and Year-on-year growth is -3.09 per cent in 2009. In case of American countries, highest year-on-year growth is 30.10 percent in 2010 and lowest growth is -9.84 percent in

2012. In case of European countries, highest year-on-year growth is 19.21 percent in 2010 and lowest growth is -4.69 percent in 2008. In case of African counties, highest year-on-year growth is 39.50 percent in 2011 and lowest growth is -17.78 percent in 2005. In Asian countries, highest year-on-year growth is 41.68 percent in 2011 and lowest growth is -11.30 percent in 2000. In Australasia countries, highest year-on-year growth is 51.80 percent in 1999 and lowest growth is -18.95 percent in 2013. The year-on-year growth of various continents and of the world is fluctuating and not setting up any particular trend of factoring growth. However, the share of Asian countries in the world factoring has increased but year-on-year growth showing negative growth in the recent past (Table 8). The trend of Europe on the basis of year-on-year is relatively showing more stable in comparison to other continents.

Table 8: Year on Year Growth Rate of World Factoring (Percent)

Year	America	Europe	Africa	Asia	Australasia	World
1999	26.13	19.08	30.30	27.63	**51.80**	22.00
2000	9.93	17.65	3.38	**-11.30**	40.42	12.04
2001	0.51	13.02	2.58	8.92	12.13	9.91
2002	-9.32	11.64	6.93	-8.17	20.10	5.62
2003	-9.33	4.61	-5.85	27.56	39.90	5.00
2004	4.86	11.99	29.90	25.12	31.75	13.05
2005	23.37	16.81	**-17.78**	21.53	28.85	18.21
2006	3.88	12.79	36.49	10.49	16.19	11.52
2007	6.53	15.53	25.75	16.51	22.51	14.79
2008	3.02	**-4.69**	23.90	35.11	-1.58	1.85
2009	-7.90	-1.34	12.47	-10.79	20.65	**-3.09**
2010	**30.10**	**19.21**	12.70	88.41	11.98	**28.38**
2011	11.75	16.60	**39.50**	**41.68**	28.00	22.24
2012	**-9.84**	6.58	2.03	9.81	-13.72	5.82
2013	2.51	4.24	-3.36	2.92	**-18.95**	3.57
2014	8.28	8.03	-8.77	2.25	5.18	6.30
2015	-9.33	6.46	-11.25	-8.03	-1.25	0.86
2016	6.46	2.31	8.93	-6.89	14.12	0.35

Source: Author's Estimation

Table 9 is showing growth index of various Continents and of the World with respect to base year 1998. The world factoring volume increased is increased many times with respect to base year. The world factoring volume is increased more than 400 percentage points in 2016. The highest growth is seen in Australasia which is more 1500 percentage points in 2011. Next best growth is seen for Asian countries that is more than 900 percentage points in 2014. The growth of Australasia and Asian may be due to lowest factoring volume in base year 1998. In case of American countries, the highest growth is more than 120 percentage points in 2011. In case of European countries, the highest growth is more than 430 percentage points in 2016. In case of African countries, the highest growth is more than 470 percentage points in 2012. However, the growth index trend of Europe, Americas and World has been showing relatively more stable and increasing trend than other continents (Figure 2).

Table 9: Growth Index of Various Continents and World Factoring (Base Year = 1998)

Year	Americas	Europe	Africa	Asia	Australasia	World
1998	100	100	100	100	100	100
1999	126.1	119.1	130.3	127.6	151.8	122.0
2000	138.7	140.1	134.7	113.2	213.2	136.7
2001	139.4	158.3	138.2	123.3	239.0	150.2
2002	126.4	176.8	147.8	113.2	287.0	158.7
2003	114.6	184.9	139.1	144.4	401.6	166.6
2004	120.1	207.1	180.7	180.7	529.1	188.3
2005	148.2	241.9	148.6	219.6	681.7	222.7
2006	154.0	272.8	202.8	242.7	792.1	248.3
2007	164.0	315.2	255.0	282.7	970.4	285.0
2008	169.0	300.4	315.9	382.0	955.1	290.3
2009	155.6	296.4	355.3	340.8	1152.3	281.3
2010	202.5	353.3	400.5	642.1	1290.3	361.2
2011	**226.3**	412.0	558.6	909.7	**1651.6**	441.5
2012	204.0	439.1	**570.0**	998.9	1425.1	467.2
2013	209.2	457.7	550.8	1028.1	1155.0	483.9
2014	226.5	494.5	502.5	**1051.3**	1214.9	514.3
2015	205.3	526.4	446.0	966.9	1199.7	518.8
2016	218.6	**538.6**	485.8	900.3	1369.1	**520.6**

Source: Author's Estimation

Figure 2: Growth Index of Factoring Volume of Various continents of World
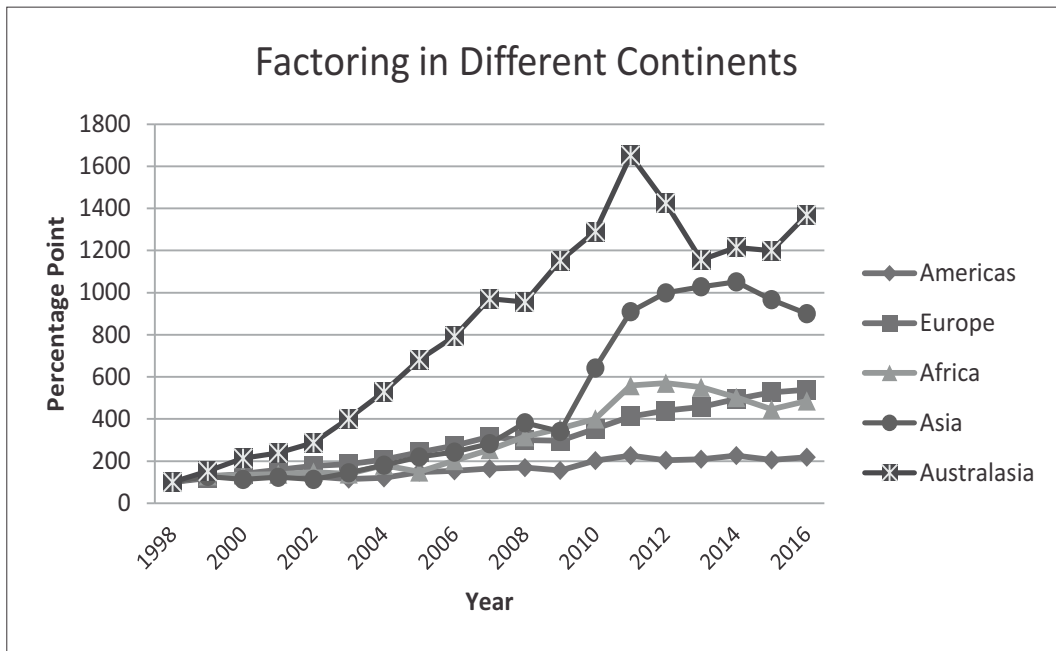
Table 10 depicts the year-on-year growth and growth index of factoring volume of the world, developed countries and developing countries. Developed country has highest 22.6 percent year-on-year growth rate in 1999 and lowest – 3 percent in 2009. While developing country has highest 106.2 percent year-on-year growth rate in 2010 and lowest -24 percent in 2000. Overall world year-on-year growth is reached to 28.4 percent in 2010 and lowest is -3.1 percent in 2009.

Factoring volume year-on-year growth is positive and significant in case of developed country, developing country and world level after global financial crisis except negative year-on-year growth in 2015 and 2016 in case of developing country. Factoring volume has increased many times with respect to base year 1998. Developed country has increased more than 320 percentage points in 2016 while developing country increased more than 1400 percentage point in 2014. World factoring volume is increased more than 400 percentage points. More than 1400 percentage point growth in case of developing country is due to low factoring volume in the base year. Factoring volume growth is stable and increasing trend in

case of developed country. The growth index of developing country has increasing trend since 2002, but it crosses the developed country in 2005. However, developing country has tremendous growth in factoring volume after global financial crisis (Figure 3).

Table 10: YoY Growth Rate and Growth Index of Developed and Developing Countries

Year	Developed	Developing	World	Developed	Developing	World
	Year on Year Growth Rate (%)			Base Year = 1998		
1998	-	-	-	100	100	100
1999	**22.6**	17.1	22.0	122.6	117.1	122.0
2000	16.3	**-24.2**	12.0	142.5	88.8	136.7
2001	10.4	3.3	9.9	157.4	91.7	150.2
2002	5.3	9.7	5.6	165.8	100.6	158.7
2003	3.9	19.6	5.0	172.3	120.3	166.6
2004	11.4	32.7	13.0	191.9	159.7	188.3
2005	15.5	44.6	18.2	221.6	230.9	222.7
2006	9.5	27.0	11.5	242.7	293.2	248.3
2007	13.2	25.9	14.8	274.6	369.0	285.0
2008	-1.3	20.8	1.9	271.1	445.8	290.3
2009	**-3.0**	-3.4	**-3.1**	262.8	430.9	281.3
2010	16.4	**106.2**	**28.4**	306.0	888.2	361.2
2011	17.0	37.9	22.2	358.0	1224.5	441.5
2012	1.2	14.7	5.8	362.2	1405.1	467.2
2013	2.1	5.2	3.6	369.9	1477.5	483.9
2014	7.2	4.1	6.3	396.7	**1538.2**	514.3
2015	6.0	-9.8	0.9	420.3	1386.8	518.8
2016	1.6	-1.8	0.3	**426.9**	1361.8	**520.6**
	Growth Rate (CAGR)			**0.077**	0.192	**0.096**

Source: Author's Estimation

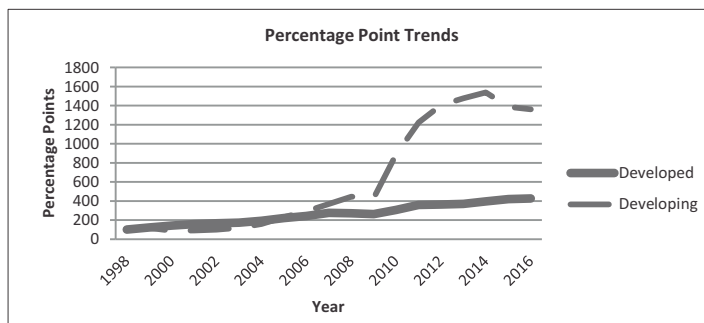**Figure 3: Factoring Trends of Developed and Developing Countries**

Table 11 depicts the country-wise year-on-year growth rate of factoring turnover during 1998-2106. In European countries, the impact of global financial crisis can be seen on the factoring service in 2009. The most the European countries are showing negative year-on-year growth rate in 2009. However, the situation of factoring service is improved after financial crisis. Among European countries, Russia has registered maximum year-on-year growth rate of 1300 percent in 2002. Russia has also minimum YoY growth rate of -73.3 percent in 2001. However, Belgium has registered positive year-on-year growth rate during the study period 1998-2016. In 2016, following European countries showing positive year-on-year growth rate – Austria, Belgium, Cyprus, Denmark, Estonia, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain and Switzerland. Slovenia has registered maximum year-on-year growth rate of 204 percent in 2016 among European countries. However, following European countries, Czech Republic, Finland, Greece, Hungary, Ireland, Sweden, Turkey and United Kingdom, have registered negative year-on-year growth rate in 2016. Sweden has reported minimum year-on-year growth rate of -21.5 percent in 2016 among European countries. In general, year-on-year growth rate of European countries has been fluctuating and not indicating any trends during 1998-2016.

In American countries, the impact of global financial crisis can also be seen on the factoring service in 2009. However, the situation of factoring service is improved after the financial crisis. Among American countries, Mexico has registered maximum year-on-year growth rate of 585.8 percent in 2010. Argentina has reported minimum YoY growth rate of -93 percent in 2002. In 2016, following American countries showing positive year-on-year growth rate – Argentina, Brazil, Canada, Chile and Mexico. Brazil has registered maximum year-on-year growth rate of 56.7 percent in 2016 among American countries. However, USA has registered negative year-on-year growth rate of 5.8 percent in 2016.

Table 11: Country-wise Year on Year (YoY) Growth Rate of Factoring Turnover

EUROPE	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Austria	9.6	13.4	**-4.1**	4.3	**28.9**	25.9	15.7	10.8	10.3	21.7	4.4	25.3	8.2	22.1	28.6	16.2	11.4	7.4
Belgium	**74.8**	4.8	12.5	4.3	22.5	17.4	3.7	19.3	15.0	17.2	6.3	34.6	18.6	10.9	12.6	16.1	10.5	**2.7**
Cyprus	16.8	25.9	10.2	**28.5**	1.9	5.2	13.3	5.0	17.2	9.0	2.9	3.0	8.9	-10.9	**-15.7**	-5.4	-9.6	21.2
Czech Rep.	**66.7**	28.8	22.4	36.7	11.8	39.4	10.1	39.5	18.8	4.6	**-24.8**	17.3	16.0	1.6	2.0	11.5	-14.3	-4.3
Denmark	16.1	20.5	**35.5**	-5.2	7.1	21.7	14.7	-1.2	10.3	9.8	29.1	12.7	14.5	-3.9	1.5	17.1	20.5	5.0
Estonia	120.7	30.9	**127.6**	53.1	5.6	73.3	-38.8	20.8	**-55.2**	**-35.1**	-29.9	22.7	-5.1	61.3	1.2	5.8	0.3	23.7
Finland	7.6	**26.6**	4.4	21.8	-2.8	4.1	14.2	6.0	14.0	0.0	**-15.0**	15.3	4.8	30.8	4.1	16.1	12.4	-4.7
France	20.0	-1.2	**29.0**	-0.4	8.6	11.5	9.1	12.3	21.6	11.0	**-5.1**	19.6	13.9	6.8	7.5	13.0	9.5	8.0
Germany	-1.7	17.5	25.1	2.7	16.3	28.3	22.5	30.6	23.6	19.1	**-9.2**	**34.7**	22.0	-0.4	8.8	10.9	10.1	3.8
Greece	42.6	**76.5**	36.7	31.4	36.6	20.4	1.8	16.0	41.9	37.5	20.6	19.6	0.1	**-13.4**	-5.2	7.6	-1.1	-0.7
Hungary	25.2	**138.9**	58.7	6.2	96.9	20.4	32.4	58.2	7.6	3.2	**-21.3**	32.5	-15.6	-5.0	-0.6	6.2	33.7	-3.8
Ireland	55.7	5.5	20.2	10.3	2.7	48.6	**76.3**	28.1	-22.8	4.7	**-19.3**	4.3	-9.2	8.9	6.3	20.1	2.0	-7.8
Italy	16.8	**25.0**	13.5	8.0	-1.7	**-8.7**	-8.1	8.3	2.0	4.4	-3.1	15.7	21.9	3.8	-2.1	2.8	4.1	9.5
Netherlands	15.8	**-22.4**	11.9	13.0	-13.0	12.0	18.9	9.4	24.8	-5.7	0.1	16.6	31.4	8.7	4.0	2.7	23.1	**26.1**
Norway	12.5	16.4	14.9	23.3	8.5	13.0	11.5	19.2	**48.3**	**-11.8**	0.7	-0.2	8.8	10.5	-10.0	5.4	7.5	18.4
Poland	-0.7	**244.6**	59.7	**-24.9**	3.2	37.2	4.5	19.6	78.5	-1.3	53.8	35.1	10.4	36.9	28.9	6.0	4.5	12.5
Portugal	**34.4**	20.7	13.3	11.3	7.4	20.7	15.4	-0.5	0.0	6.6	-1.6	17.2	34.3	**-17.7**	-2.8	-4.0	7.1	7.0
Romania	85.0	62.2	63.3	43.9	59.6	**86.7**	31.0	36.4	73.3	26.9	**-15.2**	28.6	43.4	13.1	-7.1	-0.5	35.2	10.6
Russia	250.0	114.3	**-73.3**	**1300**	188.7	133.0	124.8	236.8	53.1	23.3	-46.9	41.8	74.1	66.1	19.3	-30.5	-20.0	20.0
Slovakia	-10.6	1.3	43.2	3.4	**60.0**	73.2	24.8	58.0	5.3	15.9	**-29.4**	-13.2	19.4	-12.6	4.3	-3.0	-0.6	59.8
Slovenia	150.0	85.7	9.2	5.6	126.7	8.8	24.3	47.8	33.8	42.9	0.8	-0.8	-15.4	18.2	-3.7	-10.1	**-41.6**	**204.0**
Spain	26.1	**55.6**	21.0	33.8	18.8	21.0	22.3	20.3	25.4	19.5	4.2	8.3	8.2	1.6	**-6.0**	-3.1	2.0	13.4
Sweden	-1.7	63.0	**-57.4**	**94.8**	7.0	32.4	36.6	5.3	0.0	-26.3	17.3	0.0	55.9	13.3	-7.9	-7.4	-7.8	-21.5
Switzerland	-11.2	2.3	7.5	57.3	-32.7	**-7.5**	35.7	26.2	25.7	3.1	**93.1**	-20.0	-13.8	-13.0	3.3	23.6	1.6	1.0
Turkey	29.9	21.7	**-38.2**	8.0	25.0	**49.2**	48.8	4.9	31.5	-8.0	12.4	92.2	-20.8	2.7	1.1	28.7	-4.7	-10.7
UK	**22.5**	19.9	9.9	15.2	2.6	14.8	28.6	48.0	15.2	**-34.4**	4.0	15.7	18.5	8.6	5.8	13.8	7.4	-13.2
Others	426.7	1.3	**-82.5**	**1421**	32.4	434.8	62.3	48.0	89.9	41.8	-29.5	-2.2	19.9	18.1	13.1	16.2	-14.9	0.5
Total Europe	19.1	17.7	13.0	11.6	4.6	12.0	16.8	12.8	15.5	**-4.7**	-1.3	**19.2**	16.6	6.6	4.2	8.0	6.5	2.3

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AMERICAS	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Argentina	44.3	15.8	-40.7	-93.0	-1.4	44.3	172.3	21.1	8.7	-1.9	-5.6	4.5	35.7	29.3	39.4	51.8	19.4	21.9
Brazil	24.9	-29.4	-8.3	0.1	9.2	28.7	29.4	0.0	5.0	4.7	34.4	65.5	-7.0	-4.4	-27.7	0.7	-8.9	56.7
Canada	4.8	15.6	19.6	14.9	2.0	-0.1	21.0	-11.4	26.1	-29.7	8.3	14.6	41.9	34.4	-20.0	2.7	-5.2	1.4
Chile	30.6	1.9	17.8	0.2	11.8	20.0	126.2	18.9	29.4	8.1	-8.2	13.3	30.9	11.6	6.3	-2.5	-10.3	12.3
Mexico	40.9	41.7	37.0	-8.0	-28.5	1.4	54.3	14.8	12.9	3.8	-77.8	585.8	45.0	24.0	7.4	-9.2	-24.3	16.7
USA	25.7	16.1	-0.5	-10.4	-11.5	1.4	15.0	2.0	1.0	3.1	-11.5	7.3	10.5	-26.1	8.0	16.6	-2.7	-5.8
Others	267.0	-10.9	21.3	-17.3	3.5	-86.8	90.0	597.9	303.9	11.1	6.5	79.1	32.5	-4.9	116.0	27.6	-25.3	-35.0
Total	26.1	9.9	0.5	-9.3	-9.3	4.9	23.4	3.9	6.5	3.0	-7.9	30.1	11.8	-9.8	2.5	8.3	-9.3	6.5

ASIA	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
China	181.8	583.9	482.1	68.3	27.1	63.4	35.1	145.3	130.6	66.8	22.4	129.6	77.1	25.6	10.0	7.4	-13.1	-14.5
Hong Kong	39.1	33.3	12.1	12.6	7.3	47.7	60.4	26.1	-20.7	10.4	-5.0	78.2	20.8	68.8	9.9	-4.5	8.5	27.7
India	47.7	82.9	46.8	87.0	25.2	0.6	22.5	78.9	42.0	2.9	-49.0	3.8	1.8	30.4	43.6	-17.2	-14.7	4.9
Israel	102.8	110.0	-6.7	-17.5	-46.3	-18.4	109.7	15.4	113.3	75.0	0.0	17.9	0.0	-13.8	-25.5	183.0	-29.7	46.1
Japan	42.0	5.6	5.3	-18.2	20.2	19.8	6.5	-3.5	4.3	37.0	-21.4	17.7	12.9	-12.6	-20.5	-33.9	6.1	-8.7
Korea	-11.8	-99.2	-26.1	-35.3	-30.9	-15.8	2556.3	0.0	12.4	-5.8	226.3	72.9	59.2	-1.1	54.3	3.0	3.0	8.0
Lebanon	25.0	40.0	42.9	120.0	59.1	17.1	48.8	55.7	85.3	73.9	37.3	7.1	-27.3	-8.0	16.9	18.2	22.1	20.1
Malaysia	17.2	-27.3	43.9	-27.6	17.7	1.7	-27.1	-9.8	-2.5	17.5	27.3	51.1	-0.8	69.7	0.6	1.2	-81.8	362.7
Singapore	30.5	6.6	18.1	4.8	-6.3	6.8	10.8	2.6	10.7	22.3	17.5	23.4	15.0	30.0	15.0	279.5	2.8	4.1
Taiwan	108.2	74.6	23.6	75.5	102.0	43.8	56.5	11.1	6.3	14.7	-30.7	98.2	19.1	-12.3	4.3	-22.4	-7.0	-10.4
Thailand	41.3	25.5	-2.2	2.7	11.9	5.3	9.3	17.4	16.4	5.7	-11.0	-0.6	47.0	40.9	-22.8	23.8	6.5	20.1
UAE	88.9	23.5	33.3	14.3	15.6	291.9	203.4	84.1	-58.0	447.1	2.7	4.7	-12.5	65.7	20.7	43.4	6.6	-28.4
Others	39.4	12.1	155.0	-18.7	-13.9	-79.3	56.1	151.6	67.1	48.0	47.7	6852.4	31.7	-16.3	-19.6	-3.9	0.7	19.0
Total Asia	27.6	-11.3	8.9	-8.2	27.6	25.1	21.5	10.5	16.5	35.1	-10.8	88.4	41.7	9.8	2.9	2.3	-8.0	-6.9

AFRICA	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Morocco	**-69.5**	-21.1	11.1	**280.0**	-15.8	87.5	43.3	2.3	50.0	28.8	7.1	17.7	31.3	31.2	49.4	52.5	-35.5	0.4
S. Africa	35.0	3.9	0.5	5.0	-6.7	29.8	**-21.4**	**39.8**	25.4	23.8	11.5	12.0	41.4	0.0	-9.3	-18.1	-7.7	11.0
Tunisia	35.2	**-17.8**	**185.0**	-10.5	37.3	-11.9	22.2	19.5	-9.3	3.3	9.1	6.9	15.3	5.0	4.5	-4.8	-0.3	5.4
Others							**0.0**	200.0	**566.7**	150.0	362.0	40.7	0.6	6.7	70.5	7.7	54.0	3.4
Total Africa	30.3	3.4	2.6	6.9	-5.9	29.9	**-17.8**	36.5	25.7	23.9	12.5	12.7	**39.5**	2.0	-3.4	-8.8	-11.2	8.9

Source: Author's Estimation

Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Australia	**53.7**	43.5	8.1	20.4	44.0	32.6	27.2	18.8	20.4	-1.6	21.1	14.0	28.0	-13.7	**-18.9**	5.2	-1.3	14.1
N. Zealand	13.6	**-45.7**	310.0	13.4	-43.4	-10.3	154.2	**-83.3**	600.0	0.0	0.0							
Total	**51.8**	40.4	12.1	20.1	39.9	31.7	28.8	16.2	22.5	-1.6	20.6	12.0	28.0	**-13.7**	**-18.9**	5.2	-1.3	14.1
WORLD	22.0	12.0	9.9	5.6	5.0	13.0	18.2	11.5	14.8	1.9	**-3.1**	**28.4**	22.2	5.8	3.6	6.3	0.9	0.3

Source: Author's Estimation

RANKING PATTERN

Table 12: Change in Ranks of the Top Ten countries of World

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
UK	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1
China	46	46	39	33	31	27	24	23	17	10	8	8	2	1	1	1	1	2	2
France	4	5	5	4	4	4	4	4	3	3	2	2	3	4	3	3	3	3	3
Germany	6	7	6	6	7	7	7	7	6	5	5	5	5	5	5	5	4	4	4
Italy	2	3	2	2	2	2	2	2	2	2	3	3	4	3	4	5	5	5	5
Spain	10	10	7	7	6	6	6	6	7	6	7	4	6	6	6	6	6	6	6
USA	3	2	3	3	3	3	3	3	4	4	6	6	8	8	8	7	7	7	7
Netherlands	7	6	8	8	8	8	9	9	11	11	11	11	13	11	10	10	10	8	8
Belgium	14	11	12	11	13	13	14	15	15	16	13	13	14	13	13	11	9	9	9
Japan	5	4	4	5	5	5	5	5	5	7	4	7	7	7	7	8	11	10	10

Source: Author's Estimation

Table 13: Change in Ranks of the Top Ten Developed Countries

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
UK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
France	4	5	5	4	4	4	4	4	3	3	2	2	2	3	2	2	2	2	2
Germany	6	7	6	6	7	7	7	7	6	5	5	5	4	4	4	4	3	3	3
Italy	2	3	2	2	2	2	2	2	2	2	3	3	3	2	3	3	4	4	4
Spain	8	8	7	7	6	6	6	6	7	6	7	4	5	5	5	5	5	5	5
USA	3	2	3	3	3	3	3	3	4	4	6	6	7	7	7	6	6	6	6
Netherlands	7	6	8	8	8	8	8	8	10	9	9	9	9	9	8	8	8	7	7
Belgium	12	9	11	10	12	11	12	13	13	12	11	10	10	10	10	9	7	8	8
Japan	5	4	4	5	5	5	5	5	5	7	4	7	6	6	6	7	9	9	9
Australia	15	14	12	11	11	9	9	10	9	8	8	8	8	8	9	10	10	10	10

Source: Author's Estimation

Table 14: Change in Ranks of the Top Ten Developing Countries

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
China	16	16	13	10	9	8	7	7	4	2	1	1	1	1	1	1	1	1	1
Taiwan	10	7	5	4	2	1	1	1	1	1	2	2	2	2	2	2	2	2	2
Brazil	2	1	1	1	1	2	2	2	2	3	3	3	3	3	3	6	5	6	3
Hong Kong	8	9	7	7	7	7	5	5	6	9	9	8	8	9	6	4	6	5	4
Singapore	7	8	8	8	8	9	9	9	11	11	11	9	10	11	10	11	4	4	5
Turkey	3	4	2	5	5	4	3	3	3	4	4	4	4	4	5	5	3	3	6
Russia	18	17	17	18	14	13	12	12	7	6	5	7	9	7	4	3	7	7	7
Chile	6	6	6	6	6	6	8	8	5	5	6	5	5	5	8	8	9	8	8
Mexico	5	5	4	2	3	5	6	6	8	8	8	12	7	8	7	7	8	9	9
South Africa	4	3	3	3	4	3	4	4	9	7	7	6	6	6	9	9	10	10	10

Source: Author's Estimation

In Asian countries, factoring service has reported negative growth in Hong Kong, India, Japan, Taiwan and Thailand in 2009 due to financial crisis. However, the situation of factoring service is improved in the subsequent periods after financial crisis. Among Asian countries, South Korea has registered maximum year-on-year growth rate of 2556.3 percent in 2005. South Korea has also reported minimum YoY growth rate of -99.2 percent in 2000. In 2016, following Asian countries are showing positive year-on-year growth rate – Hong Kong, India, Israel, South Korea, Lebanon, Malaysia, Singapore and Thailand. Malaysia has registered maximum year-on-year growth rate of 362.7 percent in 2016 among Asian countries. However, following countries- China, Japan, Taiwan and UAE have registered negative year-on-year growth rate in 2016. UAE has reported minimum year-on-year growth rate of -28.4 percent in 2016 among Asian countries.

In African countries, Morocco, South Africa and Tunisia are mainly undertaking the venture of factoring services. Factoring services in Africa is a recent phenomenon. Morocco has registered maximum YoY growth rate of 280 percent in 2002, while South Africa registered minimum YoY growth rate of 21.4 percent in 2005. In 2016, African countries, Morocco, South Africa and Tunisia registered positive YoY growth rate and South Africa has highest YoY growth rate of 11 percent in 2016. In case of Australia, factoring service has been reported positive YoY growth rate except 2012, 2013 and 2015 after financial crisis in 2009.

In general, year-on-year growth rate across the countries has been fluctuating during the study periods 1998-2016. However, after financial crisis, the condition of factoring service is improved across the countries.

Ranking pattern explains the changes in ranking position of a country providing factoring service during 1998 -2016. We have classified into different country grouping such as world, developed country and developing country. We have taken top ten countries within each grouping for explaining the ranking pattern. In case of world level ranking pattern, the table 12 shows more changes in ranks of top ten countries in the initial period of study. However, the ranking pattern is more stable in latest period of the study. Out of top ten countries at world level, seven countries from Europe, two countries from Asia and one from America – USA. It clearly highlights that the factoring service has mainly mushroomed in European country as well as in developed countries. China is only country from developing country got position in top ten countries at world level. Factoring services is more rapidly increasing in

China. China has improved its position from 46th in 1998 to top rank in 2011 among developed countries. China has been competing with UK for top global rank since 2010 (Table 12).

Table 13 explains the ranking pattern of developed countries for factoring service. Among top ten developed countries, UK has holding top position every year during 1998-2016. It means factoring turnover in UK highest among developed countries group. Among top ten developed countries, seven countries belong from Europe. Japan is only Asian country within top ten developed countries. The ranking pattern of developed countries is relatively more stable during the study period than that of world level ranking pattern. Table 14 explains the ranking pattern of developing countries for factoring turnover. Among top ten developing country grouping, four countries belong from Asia, but India has no position during the period 1998-2016. China has improved its position from 16th in 1998 to top in 2008 and continue holding top rank during 2008-2016 among developing countries. Developing countries ranking pattern show more changes in ranks of top ten countries during the initial periods of study. However, the ranking pattern is more stable during latest periods of the study.

DOMINANCE PATTERN

Dynamic changes in the pattern of factoring turnover would result in changing ranks of different countries in terms of the factoring service. This represents a state of competition amongst different countries. It is normally not possible for any single country to dominate factoring turnover for whole period 1998 to 2016.

Even if a country is not at top in one or more years it should be possible to capture the dominating country. It is interesting to know whether there is any dominant country or a constant flux in the ranking of different countries.

Table 6.15 depicts that dominance pattern of factoring turnover of the world during 1998-2016. The most dominating country in term of factoring turnover is United Kingdom in the top ten world countries during 1998-2016. The next best countries are Italy and France. Relative Index of Rank Dominance (RIRD) shows those world factoring turnovers are top heavy. The first five countries which include United Kingdom, Italy, France, United States

and Germany having share of factoring turnover two-third of world factoring turnover. The first ten countries of the world have factoring turnover more than 96 percent of world factoring business. Four countries – China, Taiwan, Brazil and Korea – belong from developing countries represent only 11.3 percent of world factoring turnover. China, Taiwan and South Korea are belonging from Asia and representing 10.3 percent of world factoring turnover. Thus, world factoring turnover is particularly dominating by European developed countries.

Table 15: Index of Rank Dominance (IRD of World Factoring Turnover during 1998-2016

Country	Score	IRD	RIRD
United Kingdom	186	0.979	0.178
Italy	152	0.800	0.145
France	143	0.753	0.137
United States	114	0.600	0.109
Germany	103	0.542	0.099
Japan	88	0.463	0.084
Spain	85	0.447	0.081
China	74	0.389	0.071
Netherlands	34	0.179	0.033
Taiwan	28	0.147	0.027
Brazil	10	0.053	0.010
Australia	9	0.047	0.009
Belgium	6	0.032	0.006
Korea	5	0.026	0.005
Portugal	3	0.016	0.003
Ireland	3	0.016	0.003
Sweden	2	0.011	0.002
		5.5	1

Source: Author's Estimation

Table 16 depicts that dominance pattern of factoring turnover of developed countries during 1998-2016. United Kingdom has absolute dominance among top ten developed countries

during 1998-2016. It means United Kingdom has been holding top rank every year during 1998-2016. The next best countries are Italy and France. Relative Index of Rank Dominance (RIRD) shows those world factoring turnovers are top heavy. The first five countries which include United Kingdom, Italy, France, United States and Germany having factoring turnover around 70 percent of developed countries factoring turnover. The first ten countries of the world have factoring turnover more than 98 percent of developed countries factoring business. Developed countries factoring turnover is mainly dominating by European developed countries. United States represents only 11.6 percent of developed countries factoring turnover. Japan, only Asian developed country, is holding seventh rank and representing 9.2 percent of developed countries factoring turnover.

Table 16: Dominance Pattern of Developed Countries Factoring Services

Country	Score	IRD	RIRD
United Kingdom	190	1.000	0.182
Italy	159	0.837	0.152
France	150	0.789	0.144
United States	121	0.637	0.116
Germany	110	0.579	0.105
Spain	96	0.505	0.092
Japan	96	0.505	0.092
Netherlands	55	0.289	0.053
Australia	28	0.147	0.027
Belgium	19	0.100	0.018
Portugal	8	0.042	0.008
Ireland	7	0.037	0.007
Sweden	6	0.032	0.006
		5.5	1

Source: Author's Estimation

Table 17 depicts that dominance pattern of factoring turnover of developing countries during 1998-2016. The most dominating country in term of factoring turnover is Taiwan in the top ten developing countries during 1998-2016. The next best countries are Brazil and Turkey. Relative Index of Rank Dominance (RIRD) shows those world factoring turnovers are top

heavy. The first five countries which include Taiwan, Brazil, Turkey, China and South Africa having factoring turnover more than 63.3 percent of developing countries factoring turnover. The first ten countries of the world have factoring turnover more than 96 percent of developing countries factoring business. Asian Countries, Taiwan, China, Hong Kong, Singapore, South Korea and Thailand, is representing 41.8 percent of developing countries factoring turnover. BRICS countries – Brazil, Russia, India, China and South Africa- is representing 41 percent of developing countries factoring turnover. India is having 12th position and representing less than one percent of developing countries factoring business.

Table 17: Dominance Pattern of Developing Countries Factoring Services

Country	Score	IRD	RIRD
Taiwan	158	0.832	0.151
Brazil	157	0.826	0.150
Turkey	135	0.711	0.129
China	120	0.632	0.115
South Africa	92	0.484	0.088
Chile	85	0.447	0.081
Mexico	83	0.437	0.079
Hong Kong	80	0.421	0.077
Russia	52	0.274	0.050
Singapore	46	0.242	0.044
Korea	22	0.116	0.021
India	7	0.037	0.007
Argentina	5	0.026	0.005
Thailand	3	0.016	0.003
		5.5	1

Source: Author's Estimation

HYPOTHESIS TESTING

Modern factoring product has been in existence since 1960s in the developed market and is a far matured product offering across the world for facilitating trade finance. Factoring

industry worldwide achieved an all-time high in 2015, generating € 2,373 billion of volume (India volumes < € 2 billion), doubling up from 2009 numbers. This growth has been primarily led by Europe, followed by US and in Asia, China.

The following hypotheses have been tested stated below:

H$_1$: There has been a decline in factoring business.

This hypothesis has been rejected because the factoring business has grown many times with respect to base year 1998. Growth rate is positive and significant in all three countries grouping. Growth index also shows increase of factoring business globally as well as regionally.

H$_2$: Factoring business is not increasing towards developing countries.

This hypothesis has been rejected because of positive annual growth rate of developing countries. Growth index shows that there is an increase of more than 1400 percentage point in 2014 with respect to base year. The share of developing countries in total factoring volume is also increased year after year.

H$_3$: Dominance pattern of factoring business has not changed.

This hypothesis has been rejected because of change of dominance pattern. In case of world, top five countries- United Kingdom, Italy, France, United States and Germany - have shared of two-third of world factoring turnover. In case of developed countries, the first five countries - United Kingdom, Italy, France, United States and Germany - having share of around 70 percent of developed countries factoring turnover. In case of developing countries grouping, the most dominating country is Taiwan. The first five countries - Taiwan, Brazil, Turkey, China and South Africa - having share of more than 63.3 percent of developing countries factoring turnover. Asian Countries have 41.8 percent share of developing countries factoring turnover. BRICS is representing 41 percent of developing countries factoring turnover.

CONCLUSION AND POLICY IMPLICATION

This study is laid out at a broad cross country level. There are few studies which encompass such a vast array of countries across the world. This is a broad based study which examines the factoring of forty nine countries across three countries grouping. Several issues and approach to factoring service have been empirically measured and tested in this cross country. The contribution of the study can be summarised in the following manner:

1. The factoring service is an asset based financing scheme without incurring any additional liabilities. This is increasing the liquidity position of the companies by ensuring immediate release of funds blocked in the form of account receivables. With industrialization, the importance of factoring has been gaining importance not only in developed countries but also in developing countries such BRICS countries.

2. We have shown that there is marginal fall in dominance of developed countries and increase of share of developing countries share in world factoring volume.

3. The study has shown trends and patterns of factoring service across countries.

Policy Implication

The broad policy conclusion is that there is still a great need for a more uniform policy environment which facilitates and promotes a greater participation by all countries in different countries groupings and within each country grouping. Following are policy recommendation:

1. The market, in general, is not familiar with factoring service. There should be an independent international factoring institution which regulates, facilitates and promotes factoring service and establish coordination among all the participants. There should be an effective grievance redressal mechanism which can able to resolve dispute related to factoring activities.

2. Since, cross-broader factoring is closely associated with international trade; international factoring group should try to build alliances with the ICC Banking Commission, World Trade Organisation (WTO), and the Development Banks.

3. Dominance pattern and concentration both point out towards declining of concentration

of factoring and increasing share of developing countries. Therefore it is indicative that all countries in the world should adequately incorporate factoring into their credit policy.

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