The Effect of Public Subsidies to Private Universities in Japan

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Abstract

Private institutions in Japan have received public funds for more than twenty years. This paper analyzes the various effects of public subsidies. The first section of the paper consists of an overview of the historical background of these subsidies. The expansion of higher education has depended heavily upon the private sector in Japan due to a "laissez-faire" policy of the Ministry of Education. But as a result, the financial management of private universities became worse and caused a decline in the quality of education. The Ministry was no longer able to ignore such facts and decided to subsidize private institutions in 1970 for the first time.

The second section examines the effect of the subsidization, using empirical data. The analysis shows that after subsidization 1) the growth of enrollment has stopped, 2) tuition has hiked constantly except for the first five years, 3) the amount of subsidies has grown annually in the 1970s while it has stopped in the 1980s, 4) faculty/student ratio has improved except for the first six years, 5) faculty salary has increased constantly. Thus subsidization has not the effect in lessening the cost burden of the household which is one of three purposes of public subsidies while the other two purposes has been achieved; to maintain and improve the quality of private higher education; to improve the financial management of private universities.

The third tries to explain why tuition goes up despite the subsidies. Since the supply curve is fixed at a certain level because of non-expansion policy of the Ministry, private universities can set up tuition higher without losing their demand.

The final section considers whether the current institutional aids are adequate or not. This paper concludes that individual aid is a better way than an institutional one from both efficiency and equity points of view. This type of aid can also contribute to realizing equal opportunity in higher education.

Private institutions in Japan have received public funds for more than twenty years. Public subsidies to private colleges and universities were about 30 percent in current expenditure at the peak year although they declined to 15.8 in 1990. This paper analyzes the various effects of these subsidies. The first section of the paper consists of an overview of the historical background of the subsidies. The second section examines the effect of the subsidization on the behavior of higher education institutions, using aggregated and longitudinal data. The third tries to explain why tuition goes up despite the subsidies. The final section considers whether the current institutional aids are adequate or not.

1. The Historical Background of Public Subsidies

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Japan's economic prosperity in 1950s and 60s provided the main dynamo for higher education expansion. It worked in two ways; the private industries and central and local governments needed a number of college graduates as highly educated-productive manpower. It stimulated the supply of college education; and secondly, thanks to rapid economic development, the household income increased and the income growth allowed aspiring young people to go to college. In this situation, however the central government was reluctant to expand the public sector of higher education because of the shortage of affluent educational budget while taking on a so-called "laissez-faire" policy concerning the private sector expansion.

The Ministry of Education had traditionally controlled the enrollment of private universities to keep the quality of higher education at a certain level; the number of enrollment in private institutions was registered with the Ministry according to the number of faculty, buildings, and other educational facilities. Each private university had its own admission quota and was not basically allowed to accept more sudents than this quota. But the Ministry of Education lost such control in the face of strong demand for higher education and opposition from university administrators who wanted to expand their own enrollment. As a result, private universities became relatively free to expand their enrollment.

Thus, the expansion of higher education has depended heavily upon the private sector in Japan. To put it another way, without the private sector, there would not have been higher education expansion. The share of enrollment of the private sector to total enrollment has rapidly risen from 56.1 percent in 1952 to 74.1 percent in 1988. The realization of expanding the opportunity for higher education was achieved in differing ways between Japan and the U.S. It was by the private sector in Japan, while in the U.S. it was achieved by public sector.

The laissez-faire policy of the Ministry, however, resulted in a financial crisis and a lower quality in private higher education. As household income increased, the enrollment of higher education expanded in the 1950s and 60s. But as the enrollnent expanded, the family background of students went through a transition from relatively affluent to middle and lower income families. This change in student composition made it difficult for private universities raise tuition. Public belief at that time had it that higher tuition was cause for student unrest. In fact, one of target for student movement at that time was against tuition hike. Furthermore, higher tuition posed a threat to a loss in potential enrollment. In order to increase revenue, private institutions tried to expand enrollment and experienced more difficulty in raising tuition, resulting in a vicious cycle. The financial management of private universities became worse and resulted in a decline in the quality of education in private institutions. In view of a such situation, the Ministry of Education finally decided to subsidize private colleges and universities in 1970 for the first time in its history. In expanding higher educational opportunity, the Ministry's policy was efficient in spending less public money, but it consequently had

to clear off its debt to private institutions.

Financial crisis and ongoing student unrest became a social problem. These are the main reasons as to why the Ministry of Education began to subsidize private institutions. Another reason of the Ministry's decision was the disparity in educational conditions between private and national universities. The Ministry of Education was no longer able to ignore the poorer quality of private universities.

The three purposes of public subsidies are clearly stated in the law of subsidies; to maintain and improve the quality of private higher education; to lessen the cost burden of the household; and to improve the financial management of private universities. Public funding was launched in 1970 as institutional aids, not student aid. This method of financing private sector clearly shows that its main purpose was an improvement of the financial management and quality of education. Equalizing higher education opportunity as a purpose was secondary at best though lowering the cost burden of the household was stated in the Law. The allocation of subsidy budget to each institution was done through a formula composed of number of students, staff, salaries, instruction and research expenditures, etc.. This fromula also includes the ratio of actual enrollment to admission quota. A university gets more subsidies if this ratio is smaller. Thus, this is an induced subsidization to improve the quality of education. The Ministry, at the inception of subsidization, had shifted its policy from a quantitative expansion to quality improvement. It assumed this non-expansion policy for private higher education in the mid of 1970s. It was achieved in a subtle way. The allocation of financial resources was matched with the non-expansion policy in that universities with higher student/faculty ratios tended to receice less money. Individual institution has faced to choose one out of two options; more students and less public money, or less students and more subsidy.

2. Data Analysis

In this section, the revenue and the expenditure among private institutions are analyzed in order to examine the effect of public subsidies. The data of the Ministry of Education are used, these being in a time series (1960-1988) and having been aggregated from all private colleges and universities in Japan. The method of analysis is through rate of change. As to revenue, the following equation can be specified.

$$\text{revenue} = \text{enrollment} \times \frac{\text{tuition}}{\text{enrollment}} \times \frac{\text{subsidies}}{\text{tuition}} \times \frac{\text{revenue}}{\text{subsidies}}$$

This revenue is a general one consisting of tuition, fees, subsidies, and miscellaneous income. Hospital revenues, other profits and floating debts are not included. If the rate of change is calculated for each term, the following equation (nearly equal) can be specified.

$$\text{revenue} = \triangle \text{ enrollment} + \triangle \frac{\text{tuition}}{\text{enrollment}} + \triangle \frac{\text{subsidies}}{\text{tuition}} + \triangle \frac{\text{revenue}}{\text{subsidies}}$$

This means that the rate of change in revenue can be divided into the rate of change in each term, that is, each term in the right side contributes to the rate of change on the left. As for expenditure, a similar equation is used.

$$\text{expenditure} = \text{enrollment} \times \frac{\text{faculty}}{\text{enrollment}} \times \frac{\text{salaries}}{\text{faculty}} \times \frac{\text{expenditure}}{\text{salaries}}$$

$$\text{expenditure} = \triangle \text{ enrollment} + \triangle \frac{\text{faculty}}{\text{enrollment}} + \triangle \frac{\text{salaries}}{\text{faculty}} + \triangle \frac{\text{expenditure}}{\text{salaries}}$$

The expenditure is current, including staff salary, educational and research costs, and others. Capital expenditure and discharge of debt are excluded. The revenue, expenditure, tuition, subsidies and salaries are all deflated through a consumer price index.

2-1 Revenue

Although private colleges and universities are not profit organizations, they are eager to pursue fund raising to improve their prestige, educational quality, faculty salaries and so on. There are many ways for a private institution to raise funds. Among some of the major ways are 1) expanding the enrollment over the admission quota which is the deemed appropriate capacity for enrollment registered to the Ministry, 2) raising the tuition fees, 3) improving educational conditions to obtain more public subsidy. The first strategy was taken by many institutions, but the educational quality was not maintained by this. The second was easy as far as there was enough demand, but could not be done during the periods of student unrest, often targeted toward high tuitions. Private universities were given the third option from 1970.

During the expansion in the 1950s and 60s, most institutions took the first and second options to raise funds. As Table 1 shows, the figures for the number of students and the tuition/ student ratio are larger in 1960s. Before the subsidization in 1970, most figures of subsidy/ tuition are negative. An analysis of the rate of change in various factors reveals that the increase in enrollment slowed down and the tuition revenue per student decreased after public subsidies in 1970. In the first five years, the subsidy had the effect to lower the tuition per student. The private institutions employed the third option to secure their revenue during this time.

But as the analysis indicates, private institutions began to raise tuition from 1975 again. From 1975 to 1979, both enrollment and public subsidies increased slowly before going into a period of decline from 1980. This is interesting. Before that, private universities had expanded enrollment when they did not expect public funds. But in the 1980s, they did not increase enrollment without an increase in public subsidy. During this period of penury, revenue was

balanced primarily at the expense of student tuition charges.

There were many universities in the 1960s and first half of the 1970s where the ratio of actual enrollment to registered admission quota approached two. The subsidy law, however, speculates that institutions with a ratio over 2.4 are not entitled to be subsided. In 1988, this ratio declined to 1.2 in all private institutions. In this respect, the subsidy has an effect of keeping the enrollment down.

2-2 Expenditure

Each private university has two options in deciding budget allocation; one option is to increase the number of faculty, that is, to improve educational quality directly; the other is to raise the faculty and other staffs' salaries. This also contributes rather indirectly to improving the quality of education: to attract better faculty; to motivate teaching activities; to promote research work, etc. As indicated in Table 2, the current expenditure has increased constantly in the past twenty-nine years. In the first six years of public subsidy, private institutions have

Table 1 Decomposition of revenue factors: rate of change

year	revenue	enrollment	$\dfrac{\text{tuition}}{\text{emnrollment}}$	$\dfrac{\text{subsidies}}{\text{tuition}}$	$\dfrac{\text{revenue}}{\text{subsidies}}$
1961	0.193	0.213	0.014	0.287	-0.247
1962	0.364	0.295	0.096	-0.130	0.105
1963	0.216	0.076	0.133	-0.155	0.202
1964	0.162	0.092	0.042	-0.086	0.117
1965	0.289	0.128	0.122	-0.146	0.192
1966	0.203	0.142	0.104	-0.095	0.055
1967	0.143	0.143	0.028	0.014	-0.041
1968	0.120	0.121	-0.027	0.513	-0.322
1969	0.109	0.087	0.018	-0.042	0.046
1970	0.053	0.050	-0.050	0.749	-0.397
1971	-0.014	0.061	-0.199	0.279	-0.197
1972	0.206	0.060	0.024	0.311	-0.153
1973	0.069	0.051	-0.036	0.322	-0.201
1974	0.026	0.049	-0.112	0.328	-0.171
1975	0.147	0.049	0.096	0.065	-0.063
1976	0.168	0.036	0.083	0.039	0.003
1977	0.044	0.031	0.099	0.012	-0.089
1978	0.124	0.012	0.200	0.084	-0.146
1979	0.048	-0.014	0.098	0.006	-0.038
1980	0.065	-0.012	0.038	-0.018	0.058
1981	0.075	-0.016	0.066	-0.010	0.036
1982	0.058	-0.011	0.074	-0.084	0.088
1983	0.060	0.005	0.057	-0.090	0.097
1984	0.033	0.001	0.034	-0.166	0.195
1985	-0.005	-0.002	0.033	-0.045	0.012
1986	0.057	0.015	0.045	0.061	0.064
1987	0.073	0.029	0.049	-0.060	0.060
1988	0.069	0.034	0.029	-0.059	0.066

A rate of change in revenue nearly equals a sum of a rate of change in enrollment, tuition/ enrollment, subsidies/tuition, revenue/subsidies.

not selected the former option. It implies that public subsidy had no immediate effect toward improvement of educational quality. But in subsequent years, it did begin to improve the faculty/student ratio. An analysis of expenditure reveals that, interestingly enough, the number of faculty per student becomes worse after public subsidies, while faculty salaries increased. In the 1980s, as enrollment increase stopped, both faculty/student and salaries/faculty have contributed to the growth of current expenditure.

In sum, the analysis shows us that after subsidization 1) the growth of enrollment has stopped, 2) tuition has hiked constantly except for the first five years, 3) the amount of subsidies has grown annually in the 1970s while it has stoppet in the 1980s, 4) faculty/student ratio has improved except for the first six years, 5) faculty salary has increased constantly.

3. Why Does Tuition Rise?

The Ministry of Education took two policies at the same time: to subsidize private

Table 2   Decomposition of expenditure factors: rate of change

year	expenditure	enrollment	$\dfrac{\text{faculty}}{\text{emnrollment}}$	$\dfrac{\text{salaries}}{\text{faculty}}$	$\dfrac{\text{expenditure}}{\text{salaries}}$
1961	0.242	0.213	-0.150	0.278	-0.057
1962	0.419	0.295	-0.165	0.266	0.037
1963	0.202	0.076	0.018	0.033	0.062
1964	0.164	0.092	0.023	0.096	-0.049
1965	0.277	0.128	-0.043	0.095	0.080
1966	0.167	0.142	0.013	-0.014	0.024
1967	0.091	0.143	-0.045	0.074	-0.007
1968	0.163	0.121	-0.014	0.046	0.005
1969	0.109	0.087	-0.034	0.095	-0.036
1970	0.106	0.050	-0.018	0.092	-0.018
1971	0.017	0.061	-0.016	0.167	-0.164
1972	0.146	0.060	-0.024	0.029	0.077
1973	0.115	0.051	-0.005	0.071	-0.005
1974	0.074	0.049	-0.004	0.033	-0.006
1975	0.096	0.049	-0.003	0.052	-0.003
1976	0.075	0.036	0.011	0.022	0.005
1977	0.081	0.031	0.005	0.043	-0.001
1978	0.085	0.012	0.019	0.039	0.011
1979	0.071	-0.014	0.043	0.034	0.008
1980	0.059	-0.012	0.032	0.027	0.011
1981	0.081	-0.016	0.039	0.061	0.000
1982	0.077	-0.011	0.035	0.026	0.026
1983	0.042	0.005	0.011	0.025	0.000
1984	0.037	0.001	0.017	0.013	0.004
1985	0.038	-0.002	0.026	0.015	0.000
1986	0.049	0.015	0.008	0.027	-0.004
1987	0.065	0.029	-0.001	0.025	0.013
1988	0.065	0.034	0.000	0.026	0.000

A rate of change in expenditure nearly equals a sum of rate of change in enrollment, faculty/enrollment, subsidies/faculty, expenditure/subsidies.

universities to avoid financial crisis; and to regulate expand the enrollment of private institutions to improve the quality of education. However, these policies have concurrently induced some unintended outcome as well: they have caused tuition to increase; and some of these institutions have became selective.

Although the tuition per student has decreased the first five years since 1970, after that even the deflated tuition began to increase. One of the three purposes for subsidization was to lower the tuition and this was not achieved. Figure 1 explains this, as it shows, the demand curve shifts from D1 to D2 as, for example, household income goes up. It means that at the certain point the demand would have increased. But since the supply curve is fixed at a certain level because of non-expansion policy of the Ministry, private universities would not lose their demand even if tuition were set up higher. The price of education shifts from p1 to p2.

Figure 2 explains why private universities became selective. It reflects the effect of institutional aid. The p1 is the market price while p2 is the price after subsidies. Public subsidy makes tuition lower than the full cost of education. It brings about the excess demand q2 minus q3. In this case, the suppliers are able to choose the demanders. The demander is forced to compete with each other to get educational service. Thus private colleges and universities become more selective than before. Thereforee, it can be said that public subsidies have raised the status of private institutions. This is in accordance to the facts.

4. From an Institutional Aid to an Individual Aid

More than twenty years have passed since public subsidy began. Most private institutions support the present subsidy system and strongly demand the increase of them. Some argue that its effect should be evaluated as positive; both the educational quality and prestige in private
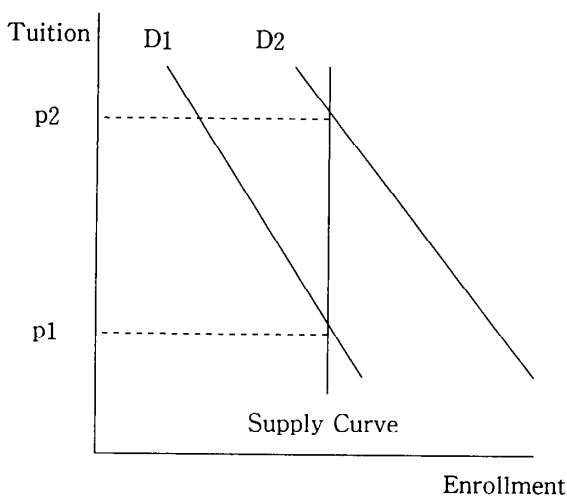

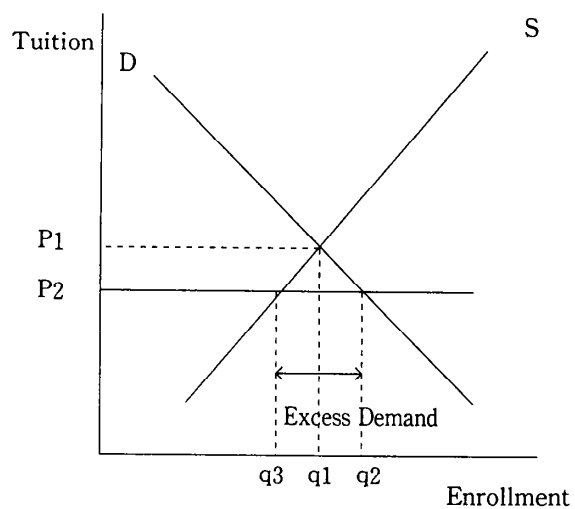Figure 1. The Effect of Inelastic Supply

Figure 2. The Effect of Institutional Aids

institutions have been actually improved; and financial management of private institution has also been improved, at least, from the fact that there were very few institutions that were closed in the past twenty years. The effective induced effect with only a small subsidy is also pointed out. Some argue that the method of subsidies is adequate because their amount is relatively small; since the financial management of private universities is inspected once universities receive any public fund, they have to be more careful and responsible with respect to their own management.

Advocates of present subsidization often worry about the negative influences that the annual amount of subsidy has never increased over the last decades both in gross and real terms. The present analysis in section two suggests the public subsidization has made the effect on improvement of the educational condition in private institutions in terms of faculty/student ratio and faculty salaries. Thus if the amount of institutional aids remains constant or even decrease in gross term, the quality of private colleges and universities is predicted to be hardly improved in near future.

However, the current subsidization is not necessarily supported by administrators and scholars. There are still problems concerning the purpose and the method of current subsidization. There is a consensus among economists that the problems of university financing should be examined under three principles; equal opportunity for higher education; efficient use of resources; equity burden of cost. However, public subsidies are apparently aimed at remedying the financial problems of private universities. This aim is not included in any of three principles and should not be the primary one.

From the point of view of efficiency, institutional aid can be criticized toward the fact that it lessens the degree of flexibility in handling financial resources, which constitutes an advantage of the private institution. It does not stimulate the self-helping effort of financial management among private institutions, consequently supporting those which provide poorer quality of education, and at the same time supporting those institution which are not desperately in heed of such aid.

Institutional aid makes the tuition of the private sector lower than marginal cost. As a result, the lowered cost provides an excess demand over the market equilibrium. Then expansion of students in private sector will occur over a socially optimal level or applicants will experience a severe competition for the college entrance examination. The latter case is favorable to private institutions since it raises the institutional status against public institutions, though.

Additionally, the lowered price policy is criticized from the point of view of equal opportunity and equity; as the past studies show that price elasticity of higher education demand is relatively low, lowered tuition does not guarantee realization of equal opportunity; lowered

price means an income transfer from non-users of less affluent families to those more affluent users of higher education service. An institutional aid subsidizes a student from an affluent family, who will perhaps earn higher income. This fact is obviously against the principle of equity of cost burden.

There is a consensus that individual aid is a better way than an institutional one from both efficiency and equity points of view. Individual aid through scholarships should be allotted to students of less affluent families, who really need it. This type of aid can also contribute to realizing equal opportunity in higher education. There are mainly three grounds for the government's subsidization to higher education; first, to train talented manpower who will eventually contribute to benefit of society as a whole, for example, economic growth or social

Appendix Table 1   Selected Financial Statistics on Higher Education

year	revenue (in billion yen)	enrollment (in thousand)	tuition/ enrollment (in thousand yen)	subsidies (in billion yen)	expenditure (in billion yen)	faculty/ enrollment (per 1,000 enrollment)	annual salaries/ faculty (in thousand yen)	price index (base years 1988)
1960	21	263	57	1	12	58.2	301	0.208
1961	26	319	61	1	16	49.5	404	0.218
1962	39	413	71	2	24	41.3	547	0.233
1963	51	444	85	2	31	42.1	608	0.252
1964	61	485	93	2	38	43.0	693	0.262
1965	84	547	111	3	51	41.2	810	0.279
1966	106	625	128	3	63	41.7	840	0.293
1967	126	714	137	4	71	39.8	936	0.304
1968	149	801	140	7	88	39.3	1032	0.320
1969	173	871	150	7	102	38.0	1189	0.337
1970	197	915	154	14	122	37.3	1398	0.364
1971	200	970	144	18	131	36.7	1729	0.385
1972	253	1028	154	27	157	35.8	1860	0.403
1973	302	1080	166	40	196	35.6	2228	0.451
1974	385	1133	183	61	262	35.5	2863	0.559
1975	494	1189	225	84	321	35.4	3368	0.626
1976	630	1231	266	106	377	35.7	3763	0.684
1977	712	1269	316	132	440	35.9	4242	0.740
1978	830	1285	393	180	496	36.6	4576	0.767
1979	902	1267	448	204	550	38.2	4900	0.796
1980	1036	1251	502	221	629	39.4	5432	0.859
1981	1168	1231	560	241	712	41.0	6041	0.900
1982	1270	1217	619	240	788	42.4	6370	0.925
1983	1371	1224	666	237	837	42.9	6648	0.942
1984	1455	1225	708	210	886	43.6	6883	0.967
1985	1478	1222	747	211	940	44.8	7137	0.988
1986	1573	1240	786	211	992	45.2	7378	0.944
1987	1688	1276	821	213	1056	45.1	7566	0.994
1988	1815	1319	852	215	1132	45.1	7813	1.000

All figures in Table 1, 2 can be calculated from the figures in this table.

development; second, the externalities. If there is a benefit for wider society not only for those who receive higher education, the government support to higher education is legitimated. However, since the social benefit cannot be quantitatively measured, the amount of subsidy is not precisely determined. Third, equal opportunity. This is a clear ground for government's support of higher education and should be a primary target. Public subsidies in Japan should aim at more equal opportunity for higher education and shift from an institutional aid to an individual aid.

日本における私立大学助成の効果*

丸 山 文 裕**

　本稿は，戦後日本の私立大学の財政状況をマクロなレベルで分析したものである。まず1960年以降の文部省統計を用い私大収入の時系列分析を行い，次に同様に支出構造を検討した。以上をふまえたうえで1970年私学振興財団の発足以後急増した国庫補助金の諸効果について検討を加えた。尚，英文では私学助成の歴史的背景，助成にもかかわらず行われた私学の授業料値上げの説明，および機関助成の問題点について検討してあるが，以下では実証分析部分だけをまとめた。

1．私立大学の収入

　私立大学は，いわゆるノンプロフィット・オーガニゼーションであるが，支出増に対するため，収入増をはからなければならない。支出増に対するためだけではなく，経営を安定させ，教員給与を改善し，学生に対する教育条件の整備のためにはむしろプロフィット・オーガニゼーションと同様，積極的に収入増加に努力しなければならない。アメリカの経済学者Howard R. Bowenによれば，大学にとってその収入がこれで十分ということはなく，大学は常に収入増を目指そうとする。日本では国立はそうでないにしても，私立大学がこういった行動をとると考えてよいであろう。

　ここでは，私立大学がどの様な方法で収入増をはかってきたかを検討する。そのために次式を考えた。

$$私大一般収入 ＝ 学生数 \times \frac{納付金}{学生数} \times \frac{補助金}{納付金} \times \frac{一般収入}{補助金}$$

ここにおいて金額はすべて消費者物価指数で修正した実質額である。この式の各項の変化率をとると，次の近似式が成立する。

$$\triangle（私大一般収入）＝ \triangle（学生数）＋\triangle\left[\frac{納付金}{学生数}\right]＋\triangle\left[\frac{補助金}{納付金}\right]＋\triangle\left[\frac{一般収入}{補助金}\right]$$

$\triangle$は変化率を表す。この式によって私立大学の一般収入の増加率にどんな要因が寄与しているかを明かにすることができる。1960年から1988年までのデータをもとに対前年度変化率を計算すると表1の通りになる。これによると次の点が明らかになる。

1）私大一般収入（実質ベース）の変化率は，1961年から69年までは比較的高く，毎年10％以上である。1970年以降は下がり，特に71年はマイナスである。1979年以降は10％以下で安定した数値となっている。

2）学生数の変化率は，1969年までは約10％またはそれ以上である。1970年から78年まではそれ以前と比べると伸びが低い。1979年以降は学生数の伸びはマイナスである。

3）学生1人当り納付金は，1961年から67年までは，バラツキはあるものの上昇している。しかし
　　1968年から74年まではマイナスの年が多く，プラスであっても数値は小さい。1975年以降には
　　コンスタントに上昇している。

4）補助金／納付金　すなわち納付金収入に対する国庫補助金収入の相対比率は，私学助成が本格
　　化する以前は，当然のことながらマイナスの年が多い。1970年以降は74年までは大きく伸びた
　　が，その後79年までは伸びが小さくなっている。1980年からはマイナスである。

2．支出構造の分析

　以下では特に消費的支出に焦点を当てて1960年以降の増大の要因を検討する。消費的支出がなぜ
毎年増加するかという問題は，単純なようでも，実はなかなか厄介な問題である。そこには複雑な
要因が絡み，また私大が多様な機関で構成されているからである。そこで一つの手がかりとして，
収入分析で用いたのと同じ様な要因分解式を考えた。

$$消費的支出 = 学生数 \times \frac{教員数}{学生数} \times \frac{教員給与}{教員数} \times \frac{消費的支出}{教員給与}$$

　ここにおいて左辺及び右辺第3項は，消費者物価指数を用いて実質化した値を用いる。さらに各
項の変化率をとると次の近似式が成立する。

$$\triangle （消費的支出) = \triangle （学生数) + \triangle \left[\frac{教員数}{学生数} \right] + \triangle \left[\frac{教員給与}{教員数} \right] + \triangle \left[\frac{消費的支出}{教員給与} \right]$$

　この式によって消費的支出増の要因を探ることができる。ここでは，学生数の増加，学生一人当
り教員数の増加，教員一人当り給与の増加を要因として考えた。右辺第4項は消費的支出と教員給
与とを関係づける項である。消費的支出，学生数，教員給与支出は大学昼間部のみの数値である。
学生数は，学部学生数および大学院学生数の計である。教員数は本務教員数のみであるが，昼間夜
間別に分離できないため双方を含む。収入増の要因分解と同じように1960年からの時系列データを
用いて，対前年度変化率を計算した結果が表2である。次の4点があきらかである。

1）実質ベースの私大消費的支出は，1960年から68年の間，67年と71年を除き，毎年10％以上の上
　　昇率を示した。1974年以降の支出変化率は，10％以下で比較的安定している。

2）学生数の変化率は，1970年を一つの区切りと考えることができ，それ以前の伸びは，その後に
　　比べて大きい。

3）学生一人当り教員数の伸びは1975年以前は，マイナスであり，それ以降プラスに転じ，教育条
　　件の向上がみられる。

4）教員一人当り給与の変化率は，1975年以前までは，バラツキは大きいが比較的高い。76年以降
　　は数値は小さく安定している。

　以上のように私立大学の消費的支出と支出増の要素の変化率は，1975年前後で傾向が異なること
が確認できた。つまり，消費的支出の変化率は，1975年以前で比較的大きいが，その増加をもたら

した要因の変化率も1975年を境にして異なる。1975年以前の比較的大きな支出増は学生数の増加と教員一人当り給与の上昇とが寄与していた。しかし75年以降は，学生数，教員一人当りの給与の変化率は小さくなり，特に学生数は1979年以降マイナスであり，それに代わって学生一人当りの教員数の増加が支出増に寄与するようになる。