ECONOMIC IMPACT ON A SPECIAL LIBRARY

M.E. Jimenez-Fragozo
Observatorio Astronómico Nacional, Instituto de Astronomía, UNAM
P.O. Box 439027, San Diego, CA 92143-9027
e-mail: bibens@bufadora.astrosen.unam.mx

V. Mata-Acosta
Instituto de Astronomía, UNAM
Apdo. Postal 70-244, C.P. 04510, México, D.F.
e-mail: bibcu@astroscu.unam.mx

and

M.A. Moreno-Corral
Observatorio Astronómico Nacional, Instituto de Astronomía, UNAM
P.O. Box 439027, San Diego, Ca 92143-9027
e-mail: mam@bufadora.astroen.unam.mx

ABSTRACT

The information analyzed shows how the Library of the National Astronomical Observatory of Mexico has been influenced in its growth and development, during 1980-1994 period, when our country has suffered a severe economic crisis.

INTRODUCTION

The Institute of Astronomy (IA) of the National Autonomous University of Mexico (UNAM), is the oldest Institution dedicated to Astronomical research in Mexico. It was founded in 1878 (Moreno, et al. 1988), which is why it has the richest bibliographic collection of astronomy in Mexico and one of the biggest and diverse collections in Latin America.

In 1980, the Institute of Astronomy started to operate on its research installation, based at the National Astronomical Observatory (OAN) located in the city of Ensenada, Baja California, Mexico, one hundred kilometers south of the United States border. In order to support the researches who came to Ensenada, as well as the technicians, and administrative staff who work with the telescopes in the remote Sierra de San Pedro Martir, Baja California, (Moreno et al. 1994), the Institute founded a Special Library at their offices in Ensenada. At the beginning, the holdings of the library were: the most important astronomical journals which were kept on microfiche; the most used stellar catalogues; and about 300 books purchased between 1977 and 1979.

CURRENT LIBRARY HOLDINGS

For more than 15 years, the OAN library has enriched its holdings with the most important series published in astronomy and related topics like: Astronomical Society of the Pacific Conference Series, The Astrophysics and Space Science Library, The European Southern Observatory Conference and Workshop Proceedings, The IAU Colloquiums, Symposiums and Transactions, The SPIE Proceedings, The Astronomy & Astrophysics Abstracts, The Annual Reviews of Astronomy & Astrophysics, and Vistas in Astronomy. It has also acquired catalogues and celestial maps like: Palomar Observatory Sky Atlas, The Digitized Sky Survey CD ROMs, the Bonner Durchmusterung and its southern extension, the Cordova Durchmusterung, the SERC

Near Infrared Survey of the Southern Milky Way and Magellanic Clouds, the SERC-EJ Equatorial Atlas, the SAO Star Catalog, the PPM Star Catalogue and the AAVSO Variables Stars Atlas.

Last year, the library had subscriptions to more than 80 journals. A few important ones are: Astrophysical Journal and Supplement Series, Astronomical Journal, Astronomy & Astrophysics and its Supplement Series, Monthly Notices of the Royal Astronomical Society, Astrophysics and Space Science, Publications of the Astronomical Society of the Pacific, Astrophysics. Collections of series and journals has been growing, as well as the other material in the library. Today the library has around 3,000 books on different astronomical topics, as well as compact disks, slides, videocassettes, videodisc, and other materials that are useful for the astronomical program of this institute.

ECONOMIC IMPACT

The economic conditions of Mexico place the country in the third world. This fact is reflected directly in so many development aspects of the Mexican society, particularly when you consider the economic resources that the country has designated to science. As a matter of fact, during 1991, the percentage of the Gross Domestic Product (GDP) used to support the scientific growth and infrastructure in Mexico was only 0.47% (CONACyT, 1994), a low value compared to the minimum recommended by organizations like UNESCO to encourage armonic growth in the undeveloped countries. In 1992, the percentage of the GDP designated by the Mexican goverment for science and technologoy activities went down to 0.43%, while in 1993 it went up to 0.52%, rising again in 1994 to 0.55%. Nevertheless, the 1994 value was lower than the one of 198l, 0.57%, year that the National Council for Science and Technology (CONACyT) started as the ruling organization of the national scientific policy of Mexico.

It must be noted that even though the expenditures towards science and technology made by the Mexican government have been increasing since 1988, the growth of that "investment" is several times less than the population growth, actually 2.8% annual, also one of the parameters to be considered as a third world country.

Besides the difficulties presented above by the low level of the national funds for science and technology, (Fig. 1) the instability of the Mexican peso against foreign currency, in particular the American dollar, have complicated the possibilities of a long period planning. As shown in Table 1, the peso has been suffering a devaluation process since 1976, a condition that makes the acquisition of goods made out of the country enormously difficult.

DIFFICULTIES OF A SCIENTIFIC SPECIALIZED LIBRARY

Since October 1980, the Library of the National Observatory has had an adequate amount of space in the Building of the Institute of Astronomy in Ensenada, B.C., as well as one responsible employee in charge of its efficient installation in an specific area of 100 m2 and a volume of 250 m3. Originally people thought that the allocated area was too big, but the growth that this library experienced through the years has shown that the space is not big enough.

The acquisition of bibliographic material has been mainly been possible though funds supplied by UNAM, who receives their funds from the Federal Government. Figure 2 is a graphic showing the growth of the book acquisition during the years 1980 and 1994, while Figure 3 shows the journal acquisition through subscriptions during the same years. The book acquisition seems to have an erratic behavior, but in reality this is not the case. To help you to read Figure 2 you need to know that the value corresponding to 1980 is really the result of the book acquisitions in the preceeding 4 years. The Library of the OAN started to operate officially in 1981. The drop that Figure 2 shows is directly related to the rough parity change between the Mexican peso and the US dollar. This change is illustrated in Table 1. The high in 1985 is due to funds obtained through CONACyT specifically for book acquisition for this Library, as well as a Geschenk der Alexander von Humboldt of Germany, who donated astronomical books published in Germany.

Fig. 2 shows stabilization starting in 1991.This means that the institution had enough funds for the book acquisitions that our researchers considered necessary for their work. This stabilization is a reflex shown by the Mexican economy, when Mexico renegociated its debt to international creditors. During this period we acquired an average of 290 books per year.

Fig. 3 shows an even more stable condition due to the acquisition of journals, where the subscriptions needed to be paid in advance. There is a definite drop between 1982 and 1984 due to the strong devaluation the Mexican peso suffered in these years, where 13% of the subscription to publications was cancelled, keeping only the ones consulted by our researchers. It was not until 1989 that we reached the same number of publications that we started with in 1981. During this period, we lost continuity of several issues so our collection of the cancelled publications is incomplete, which is a great loss from the bibliographic point of view.

COMMENTS

Figures 2 and 3 show the great vulnerability of our library, from external economical factors. The material that we have in the Library comes from outside, with prices quoted in US dollars, German marks or Pound sterling.These circumstances make it difficult to plan a rational growth, which is for the needs of the users.

In a country like Mexico, where scientific tradition is recent, it is hard to get adequate financing for the efficient operation of a Library specializing in astronomical and astrophysical research. This is especially noticeable in the purchase of publications, since the burocratic attitude of the state and the university, does not understand the importance of a good Library in the research process. The higher cost of the most important astronomical journals makes them an easy target for the budget cut. For example, in 1994, when we finally reached a number of subscriptions necessary for the work done in the OAN, (Figure 3), there will be another drastic drop, due to the severe devaluation the Mexican peso is suffering (more than 100%) due to the recent economic crisis. This is making us reduce the number of subscriptions, since the funds assigned for the purchase of books and publications is the same as in 1994.

REFERENCES

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TABLE 1

Average parity of the mexican peso with the US dollar

Year	Pesos X Dollars
1975	12.5
1976	15.69
1977	22.69
1978	22.76
1979	22.82
1980	22.98
1981	24.51
1982*	57.55
1983	120.16
1984	167.76
1985	318.3
1986	515.0
1987	1420.0
1988	2284.85
1989	2692.0
1990	2941.9
1991	3073.7
1992	3117.4
1993*	3.10**
1994	3.14

* free dollar parity

** new pesos

SOURCE: BANCO DE MEXICO