# DEMAND FOR PERFORMING ARTS

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Why to study demand?

Throsby &Whiters 1979:
- life-blood for performing arts – no sense without viewers (art-for art sake?)
- fundamental motivations (aesthetic, psychological, social) is conditioned by economic influences...
- ...economic conditions change from time to time, what in long term can shape the arts demand

- business perspective

- audience development

- public sector: who do we donate when we donate theater? – rationale for public subsidies
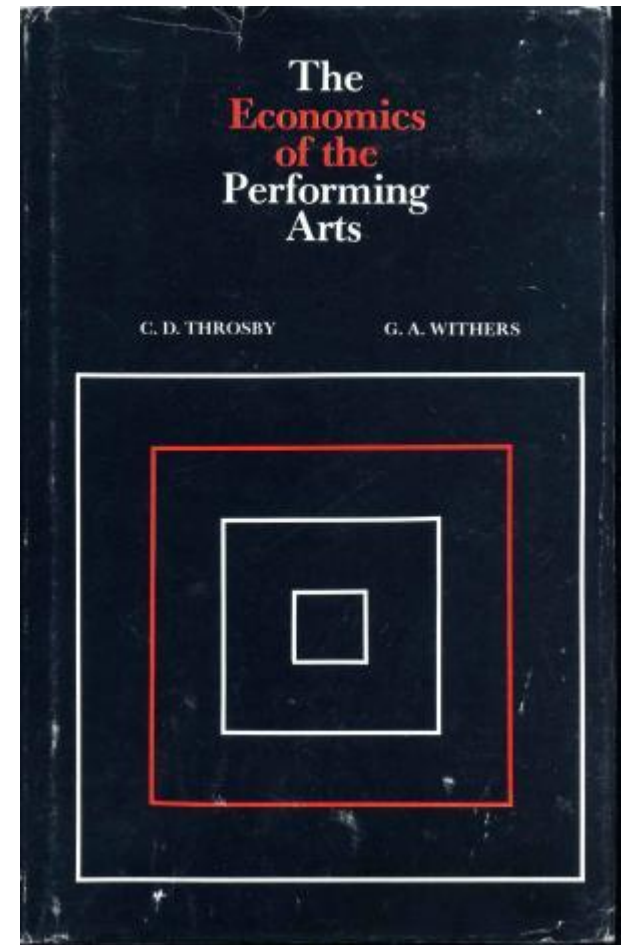
Measures of demand

- individual level of institution or good (in a theater/ for a performance): number of visits – number of artistic experiences, attendance (%)

Table 1. Warsaw municipal theaters' characteristics (monetary values in EUR, annually).

	Entertainment theaters	Drama theaters	Children's theaters	Experimental theaters	Total
Number of theaters	6	6	3	3	18
Premiers	21	29	7	10	67
Performances	1,714	1,310	842	274	4,140
Viewers	548,956	197,095	133,000	38,112	917,163
Share of theater visits	60%	21%	15%	4%	100%

- aggregated level for the entire market and for a given population: exposure of the population (%), average frequency of attendance

TABLE 7.1
*Performing Arts Exposure of the Population (%)[a]: Australia, 1976*

Population Characteristics	Theatre	Symphony	Opera	Ballet
Total	17	9	6	10

TABLE 7.3
Average Frequency of Performing Arts Attendance by Theatre-Goers by Art Form: Australia, United States, United Kingdom and Canada, various years.
(number of attendances per year)

Art form	Australia (1975)	U.S.A. (1964)	U.K. (1965)	Canada[a] (1972)
Theatre	12.8	8.4	10.2	4.5
Serious Music	6.2	7.3	10.8	4.8
Opera	2.9	1.7	4.6	2.6
Dance	3.1	1.2	1.7	2.3

Standard determinants of demand in economics | **Price**

- price and price of substitute
  - price of ticket, price of complimentary activities, price of time (alternative cost of leisure time)

- economic measure of influence: price elasticity of demand
  - the percentage change in quantity demanded in response to a one percent change in price (usually negative, sign (-) omitted)
  - $\varepsilon_p = \dfrac{p}{Q_d} \times \dfrac{dQ_d}{dp}$
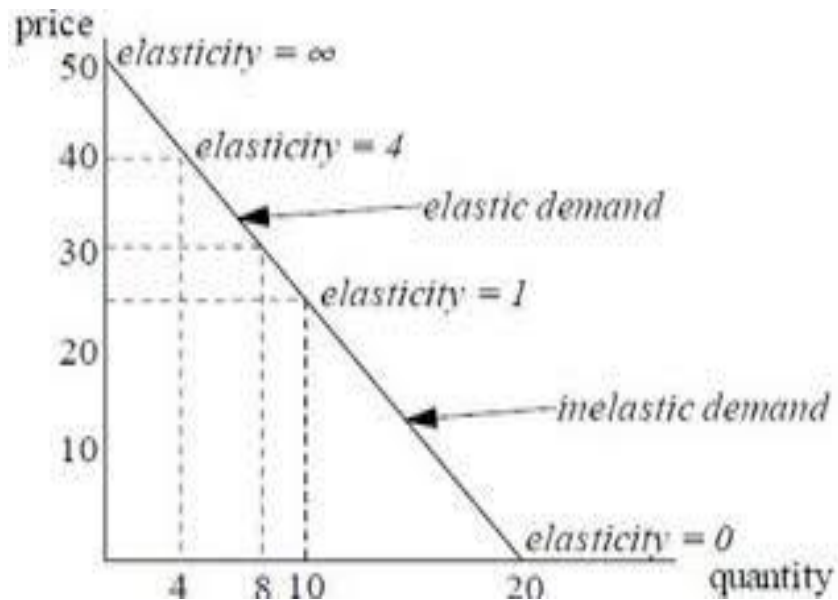
Wikipedia examples:

- Cigarettes (US)[43]
  - −0.3 to −0.6 (General)
  - −0.6 to −0.7 (Youth)

- Soft drinks
  - −0.8 to −1.0 (general)[55]
  - −3.8 (Coca-Cola)[56]
  - −4.4 (Mountain Dew)[56]

- own-price elasticity and cross-price elasticity

Standard determinants of demand in economics | **Price**

- different results in empirical studies:
  - 12/29: inelastic (Seaman, 2006); disaggregated data: price elasticity of demand around or below 1
  - positive price elasticity of demand?
  - substitutes more important than compliments: growing number of substitutes getting cheaper (Kindle, Spotify, Netflix… but we still read paper books and go to cinema…)

- reasons for 'low responsiveness' of demand:
  - acquired taste (Thrisby 1994: 'qualitative characteristics are likely to be decisive')
  - 'singularities' argument
  - strategic behaviour of firms (theatres): to set price in the inelastic range of demand curve [business reasons – patronage; social/public-good reasons – accessibility]
  - average high level of income -> to be discussed

- effects for pricing policies:
  - example of free admission
  - newcomers, next generations

Standard determinants of demand in economics | **Income**

- entertainment for elites

- income elasticity of demand for performing arts – ambiguous results

- means of general increase in income in population:
  - rising equality

  - „median voter" approach: middle-class expectations

  - paradox of affluence:

    Keynes about possibilities of grandchildren: *the ascendery of people who can keep alive, and cultivate into fuller perfection, the art of life itself and do not sell themselves for the means of life, which will be able to enjoy the abundance when it comes* („life in Arcadia")

    But: quick pace of life getting hectic (ability to concentrate of human being vs. goldfish...)

  - quality of life

Family Income		
Income	Arts Audience	Population
AUSTRALIA	(1974)	(1971)
Over $3000	90.8%	63.9%
Over $6000	74.5%	33.8%
Over $10,000	46.2%	5.5%
UNITED KINGDOM	(1965)	(1961)
Over £499	96.1%	78.0%
Over £1749	47.3%	14.0%
Over £2500	29.2%	5.0%
UNITED STATES [d]	(1973)	(1970)
Over $7500	85.8%	71.3%
Over $15,000	48.0%	26.8%
Over $25,000	16.0%	5.8%

Standard determinants of demand in economics | **Income**

- reasoning through the leisure price (the alternative cost of free time):
  - **when we earn more**, we can effort more units of a good (we can buy more tickets), but…
  - …price of leisure (cost of time) is a part of price for performing arts
    - measure of price of leisure: with relations to wages (e.g. Throsby & Whiters 1979: $P_L = w(1-u)$, where u – unemployment rate; other measures: share of hourly wage: 1/3, ¼)
  - **when we earn more**, the price of leisure increases also…
  - …what ends with substitution effect: goods that are more time-intensive in consumption become relatively more expensive
    - can we diminish time-intensivity of performing arts?

- full income: $FY = T_c p_L + T_w w$

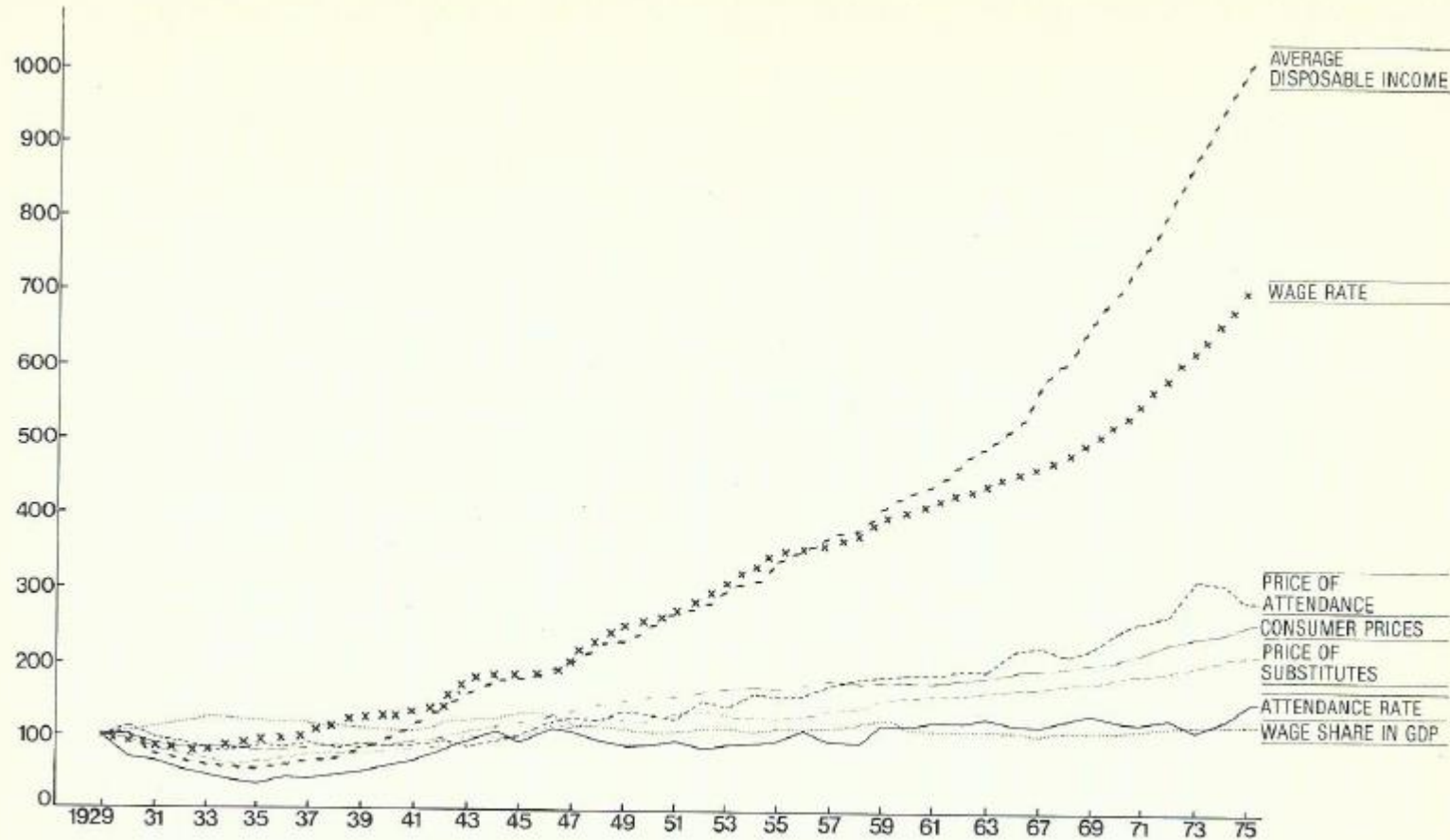# Standard determinants of demand in economics | **Income**

Figure 7.1 *Economic influences upon demand for the performing arts: United States, 1929-1975*

price of attendance and wages (price of time) increased faster than price of substitutes, all of them rising faster than CPI -> performing arts relatively more expensive -> incentive to reduce attendance
BUT
long-run rise in per capita disposable income -> incentive to increase attendance

Seems that pure income effect outweighs the relative price disincentives.
Similar conclusions for Australia and Canada.

Standard determinants of demand in economics | **Income**

TABLE 7.7
Demand for Performing Arts Services: United States, 1929-1973 [a] [b] [c]

Equation	Period	Constant	Price of Attendance	Income	Full Income	Price of Leisure	Price of Substitutes	Income Distribution	Depression Dummy	Lagged Dependent	Auto-Regression Parameter	d	R²
					CONVENTIONAL MODEL								
1	1929-73	−2.70 (−1.69)	−0.90 (−6.44)	1.08 (9.01)			0.68 (2.03)	0.11 (0.27)	0.23 (3.61)	0.19 (2.16)	0.59 (3.96)	1.73	0.98
2	1929-48	−4.36 (−1.79)	−1.07 (−2.71)	0.64 (3.71)			0.80 (1.70)	−0.63 (−1.30)	0.11 (1.40)	0.41 (3.24)	−0.18 (−0.48)	1.94	0.98
3	1949-73	−1.82 (−0.52)	−1.19 (−6.38)	1.55 (7.16)			1.25 (1.48)	−0.59 (−0.77)		0.19 (1.26)	0.68 (2.57)	1.93	0.94
					TIME-ALLOCATION MODEL								
4	1929-73	−23.14 (−1.59)	−0.67 (−4.60)		2.74 (2.30)	−1.61 (−1.45)	1.06 (2.52)	−0.12 (−0.27)	0.23 (2.68)	0.31 (3.07)	0.15 (0.76)	1.84	0.97
5	1929-48	−13.17 (−0.91)	−0.62 (−2.16)		1.43 (1.97)	−0.59 (−1.07)	0.62 (1.94)	0.16 (0.29)	0.25 (2.87)	0.41 (5.21)	−0.46 (−1.19)	2.40	0.99
6	1949-73	−22.46 (−1.23)	−0.65 (−2.35)		2.78 (1.46)	−1.03 (−1.09)	1.35 (1.50)	−1.15 (−1.08)		0.08 (0.27)	−0.07 (−0.19)	1.93	0.86

Notes: (a) The dependent variable is performing arts attendance rate;
(b) t-statistics in parentheses;
(c) Consumer price index deflator applied in conventional model; full price index deflator applied in time-allocation model.

- significant effect of own price (negative) and price of substitutes (positive) -> low-price-elasticity of demand
- significant effect of income: full income effect offset by smaller leisure price effect -> time-intensity in consumption is an important factor in limiting growth of demand

SD determinants of demand | **education**

TABLE 7.4
Performing Arts Audience Characteristics: Australia, United Kingdom and the United States, various years

Income	Family Income		Education	Education	
	Arts Audience	Population		Arts Audience	Population
AUSTRALIA	(1974)	(1971)		(1974)[a]	(1971)[a]
Over $3000	90.8%	63.9%	Primary	1.8%	31.7%
Over $6000	74.5%	33.8%	Secondary	32.2%	59.0%
Over $10,000	46.2%	5.5%	Tertiary	66.0%	9.3%
UNITED KINGDOM	(1965)	(1961)		(1965)[b]	(1961)[b]
Over £499	96.1%	78.0%	14 or under	5.7%	59.7%
Over £1749	47.3%	14.0%	15	6.5%	20.6%
Over £2500	29.2%	5.0%	16	14.6%	10.2%
			17-19	27.6%	6.3%
			20 or over	45.6%	3.2%
UNITED STATES [d]	(1973)	(1970)		(1973)[a]	(1970)[a][c]
Over $7500	85.8%	71.3%	Some High Sc.	18.8%	38.1%
Over $15,000	48.0%	26.8%	High Sc. Grad.	22.3%	33.5%
Over $25,000	16.0%	5.8%	Some College	23.5%	15.4%
			College Grad.	35.4%	13.0%

- age: difference between studies of these who attended "at least once" and studies of frequency of attendance (Seaman 2006)

TABLE 7.1
Performing Arts Exposure of the Population (%)[a]: Australia, 1976

Population Characteristics	Theatre	Symphony	Opera	Ballet
Age				
Under 20	9	4	3	3
20-29	22	10	3	8
30-49	19	10	8	13
50 and over	15	11	9	12
Education				
Primary only	8	3	4	2
Some secondary	13	5	5	7
Four years secondary	17	7	4	10
Five to six years secondary	18	10	8	13
Tertiary	34	26	12	18

Primarily characteristics: rich and well-educated:
- Is that really bad information for cultural policy? (case of ABC Radio guide)
- Multicollinearity problem – what counts more:
  - *Difference in symphony attendance for a given level of education between high and low income people was about 5%. But the difference in attendance for a given income level between high and low educated people was about 17%.* (Throsby &Whiters, 1979, pp. 101)

SD determinants of demand | **education and…**

Role of education:

- specialisation and network effect

- search costs

- What kind of education?
  - general vs. training in the arts and **past experience** (past arts exposure)

acquired taste

consumption efficiency / consumption capital / cultural capital

taste cultivation (regular attendance) / habit formation (behavioural inertia)

learning-by-consuming: *consumers are characterized as uncertain about their utility functions but learn their own subjective preference structures through a process of consumption experiences generating either positive or negative feedback … having experienced repeated pleasant surprises -> revising expectations upward* (Seaman, 2006)

in search of surprise, in search of joy

difference between a beginner and a professional viewer

rational addiction: *consistent forward-looking behaviour where consumers maximize an intertemporal utility function and are willing to sacrifice current utility for future utility by making investments in human capital (either general education, or more targeted training)*

SD determinants of demand | **education and...**

Table. Results of the count-data model for number of trips to cultural institutions.

	Museum		Theatre		Cinema	
Constant	0.5080	***	1.7467	***	0.6823	***
CS per trip	0.0322	***	0.0246	***	0.0112	***
Household income (in 10 000 PLN)	0.2576	***	0.7315	***	0.6726	***
Middle education (base level: basic education)	0.1263	**	0.1860	***	0.1964	***
Higher education (base level: basic education)	0.3050	***	0.4073	***	0.4063	***
Years living in Warsaw (in 100 years)	−1.2493	***	−1.4502	***	−0.7702	*
Years living in Warsaw squared (in 100 years)	1.9501	***	2.0037	***	1.4709	**
Have job	0.1021	*	0.2250	***	0.1324	**
Have 1 child (base level: no children)	0.2544	***	0.0353		0.1629	***
Have 2 children (base level: no children)	0.0026		−0.1404	*	0.1006	
Have 3 children (base level: no children)	−0.2943		−0.2382		−0.0488	
2 people in a household (base level: 1)	−0.0404		−0.1342	*		
3 people in a household (base level: 1)	−0.1552	*	−0.2070	***		
4 people in a household (base level: 1)	0.0539		−0.0717			
More than 4 people in a household (base level: 1)	0.1015		−0.1140			
Household income squared (in 10 000 PLN)			−0.1805	***	−0.1443	**
Household income not reported	−0.1096	**				
Age (in 100 years)			−1.1752	***		
Born in Warsaw			0.1201	*		

Product quality

'quality' characteristics strongly influence demand, more than standard demand determinants like own price, price of substitutes or income…

- objective measures:
  - supply-side features:
    - expanses on different elements of a performance („technical standard of design") and labour involvement („technical ability of artists")
    [assumption behind?]
    - compilation of repertoire of own and guest („theater reputation")
    - length of staging („success in performance's appeal")
  - type of play (many divisions, basic: comedy/drama, relations with time of a play creation, nationality of an author, language a play is written in etc.)

- subjective assessment: press reviews / words of mouth

study	category	taxonomy
Throsby 1983	repertoire classification	written before 1900 ('classic') written after 1900 by well-known author written after 1900 by little-known or unknown author entertainment, revue, musical
Abbe-Decarroux 1994	repertoire classification	'classic' play (written before 1900 'modern' play (written after 1900 – deceased author) 'contemporary' play (written after 1900 – living author) 'atypical' play (circus, revue, collective creation…)
Urrutiaguer 2002	repertoire classification	'classics': author died before 1900 plays written before 1980 by author who died in 20th century plays written in French by an author who is still alive, and those written in French by author now dead, but published after 1980 plays written in foreign language by an author belonging to the contemporary category
Corning and Levy 2002	genre	comedy drama musical Shakespeare "Tommy"
Willis and Snowball 2009	genre	classic modern known playwright modern unknown playwright
	production type	comedy drama musical
Grisolia and Willis 2011, 2012	repertoire classification/ type of a play	comedy drama modern experimental/adaptation of a classic play
Wiśniewska and Czajkowski 2017		entertainment drama children's experimental