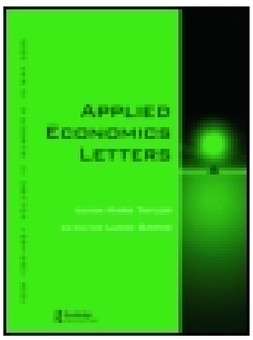

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ARTICLE

The determinants of pornography actress production

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ABSTRACT

This study investigates empirically the influences of physical appearances and risky sex in the production of adult video (AV) actresses. By analysing data concerning the Japanese AV actresses whose careers commenced between 2002 and 2013, we found that significant increases in the number of video shots of actresses are brought by cup sizes, working experiences, experiences as models or entertainers, and acting in videos of risky sex, but acting in risky sex videos has no significant influence on the production of those with greater cup sizes or serving as models or entertainers. We interpret that these actresses attract the market attention by their favoured appearances, and thus have no incentives to raise their production by acting in risky sex videos.

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Pornography; adult video (AV); physical appearance; risky sex; Japan

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1. Introduction

Pornography industries have grown with the advancement of the Internet and modern technology. Though impacts of the sex-related Internet use have drawn lots of attention of researchers (e.g. Doornwaard et al. 2015 and references therein), the literature showed limited empirical discussions on the issue of pornography actress production. Studies related to pornographic films mostly focus on the explorations that viewers may have caused sexual risk behaviours (Tadesse and Yakob 2015) and subsequent sexually transmitted diseases (Mahapatra and Saggurti 2014). For the pornography actress production, there are few studies addressing related issues, such as the effects of pornography consumption on the US males in Wright (2013) and on gender equality in Baron (1990), and the damaged goods hypothesis on female performers in Griffith et al. (2013). In response to the recent research development, Voss (2012) argued that academic studies do not really focus the business aspects of pornography and thus proposes associated theoretical frameworks and methodological approaches in order to gather rich empirical material for a wider pornography research field. In this article, we alternatively investigate the pornography actress production with an emphasis on the impacts of actress physical appearances and risky sex behaviour based on publicly available individual data.

The literature of labour economics has illustrated the existence of a sizable wage premium due to the physical attractiveness of workers, including Hamermesh and Biddle (1994), Biddle and Hamermesh (1998), Pfann et al. (2000) and Mobius and Rosenblat (2006) to name a few. Some studies further pointed out that female workers in the pornography industry earn twice more than those in other industries (e.g. Rao et al. 2003; Torre et al. 2010), while others indicated the relationship between highly risky sexual services and their prices (e.g. Rao et al. 2003; Gertler, Shah, and Bertozzi 2005; Islam and Smyth 2012; Chang and Weng 2012).

For instance, Islam and Smyth (2012) found that attractive female workers have better capabilities of negotiation and demand higher pays for highly risky sexual services in the Bangladeshi sexual service industry. By using data from Mexico, Gertler, Shah, and Bertozzi (2005) found that appearances of sex workers influence their risk-taking behaviour of offering risky sexual services. On the other hand, Chang and Weng (2012) conducted empirical analyses using random samples of street prostitutes in Taiwan and found that the price for sexual services and the figures of sex workers have certain relations. Obese workers are

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more willing to provide risky sexual services. However, the samples used in Chang and Weng (2012) were relatively few and confined to a particular region, which may result in difficulties demonstrating generality in the sexual and pornography industries.

In contrast, this study looks at the physical appearance and risky sex influences on the production of female sex workers in the adult video (AV) industry, on which the literature had rarely focused. Recent data establishment of AV actresses in the industry makes related analyses possible. Although due to business privacy we do not have information concerning the labour contracts of AV actresses, their productions and other personal characteristics are rather accessible. Therefore, to investigate the effects on the production (video shots) of AV actresses by cup sizes, side jobs, risky sex, professional experiences, ages at which they commence their careers, so on, this study collects the related Japanese AV data for further empirical analyses.

2. Data and methodology

Empirical data for the present study are obtained from the collections released by the Japanese 'Digital Media Mart', which on a regular basis collects data regarding videos and personal information of the Japanese AV actresses. We use the data of 439 samples, whose careers commenced between 2002 and 2013. Definitions of relevant variables and descriptive statistics can be seen in Table 1. In this study, we are interested in the video production represented by a number of video shots. It is noteworthy that, similar to ordinary films, efforts asked of each character differ, and thus the number of video shots is categorized as 'number of total video shots' and 'number of single-actress videos'. We consider only the actresses with a positive production, namely, those producing at least one video shot.

In addition, a variable 'risky sex' is defined as whether the actress has acted in films where she faced high possibilities of sexually transmitted diseases or other factors with health influences, such as sexual abuses. The physical appearance of AV actresses is proxied by the cup size and side job. The cup sizes of actresses reflect consumers' preferences on breast sizes. On the other hand, due to the fact that AV actresses possibly hold other occupations, if an actress also serves as a model entertainer, it might be inferred that her fame results from her extraordinary appearance.

Similar to Rao et al. (2003) and Chang and Weng (2012), the empirical model in this study examines that the production of adult actresses is determined by a set of selected characteristics:

$$\log(Y_i) = \log[Y(A_i, X_i)], \tag{1}$$

where Y_i is a dependent variable: the total number of films or a number of single-actress films (SAM). In addition, for independent variables, A_i measures the physical appearances (*Cup* and *Model_Entertainer*), *Risky_sex* and their interaction terms, and X_i is a vector of other independent variables (working experience and Debut age). The empirical models estimated by the ordinary least square method can be expressed as follows:

$$\log(Y_i) = \beta' X_i + \gamma_1 Cup + \gamma_2 Model\_Entertainer + \varepsilon_i, \tag{2}$$

$$\log(Y_i) = \beta' X_i + \gamma_1 Cup + \gamma_2 Model\_Entertainer + \gamma_3 Risky\_sex + \varepsilon_i, \tag{3}$$

$$\log(Y_i) = \beta' X_i + \gamma_1 Cup + \gamma_2 Model\_Entertainer + \gamma_3 Risky\_sex + \gamma_4 Cup * Risky\_sex + \gamma_5 Model\_Entertainer * Risky\_sex + \varepsilon_i \tag{4}$$

where $\beta, \gamma_i, i = 1, 2, \ldots, 5$ are parameters to be estimated, and ε_i is an error term.

Table 1. Descriptive statistics (sample size: 439).

Variable	Definition	Mean	SD	Min	Max
SAM	Number of single-actress films in career	43.0866	50.1523	1	405
TM	Total number of films in career	171.2711	237.5549	2	1907
Working month	Working month	41.8633	30.0460	2	162
DAge	Debut age (year)	21.4579	4.2445	17	52
Cup	Cup size	4.8292*	1.9597	1	13
Model_Entertainer	If model or entertainer (=1)	0.4191	0.4940	0	1
Risky sex	If agreed to film internal cum shot or SM movies (=1)	0.8428	0.3644	0	1

* Cup size: $A = 1$, $B = 2$, $C = 3$, …, $M = 13$. The average size is somewhere between *D* and *E*.

3. Empirical results

Table 2 categorizes the samples based on the cup sizes of actresses, to explore the proportion of different samples, side jobs as models or entertainers, and numbers of extraordinary video shots. Of these samples, cup sizes C, D and E make up 60%. Except for the A-cup samples, all other groups consist of actresses serving as models or entertainers. In the issue of whether actresses have acted in videos containing risky sex, the ratio is found more than half of the samples in each group. This is a highly possible result of market competition. That is, *vis-a-vis* pressure of sales of products, actresses probably acted in such videos to boost their production and exposure in the market.

The estimation results of Equations (2)–(4) are presented in Table 3. Model 1 and Model 4 indicate that working months have a positive influence on the production of AV actresses but demonstrate diminishing marginal effects. That is, the later an actress commences her career, the fewer video shots she produces. Cup sizes and experiences as models or entertainers have positive effects on the number of video shots. Greater cup sizes increase the numbers of total films and SAM up to 6.1% and 3.84%, respectively. On the other hand, having experiences as models or entertainers increases the numbers of total films and SAM up to 21% and 32.1%, respectively. Considering the risky sex (Model 2 and Model 5), the impact of cup sizes and the experience as models or entertainers is similar to the results shown in Model 1 and Model 4. However, the results indicate that having acted in risky sex videos could increase the production of an AV actress by more than 60%, which implies that, if the actress is willing to perform risky sex, her production may be significantly increased.

Table 2. Sample distribution by cup.

Cup	Sample (Freq)	Sample (%)	Model or entertainer	Risky sex
A	5	1.14	0.00%	60.00%
B	23	5.24	43.48%	78.26%
C	96	21.87	38.54%	90.63%
D	89	20.27	46.07%	77.53%
E	90	20.50	42.22%	85.56%
F	55	12.53	41.82%	89.09%
G	47	10.71	29.79%	85.11%
H	13	2.96	53.85%	76.92%
I	9	2.05	77.78%	77.78%
J	5	1.14	60.00%	80.00%
K	4	0.91	50.00%	100.00%
L	2	0.46	50.00%	50.00%
M	1	0.23	100.00%	100.00%

Table 3. Empirical results.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	log(TM)	log(TM)	log(TM)	log(SAM)	log(SAM)	log(SAM)
Working month	0.0644***	0.0606***	0.0603***	0.0411***	0.0380***	0.0380***
	(0.0047)	(0.0045)	(0.0045)	(0.0039)	(0.0038)	(0.0038)
Working month Square	−0.0003***	−0.0002***	−0.0003***	−0.0002***	−0.0001***	−0.0001***
	(0.0000362)	(0.0000350)	(0.0000352)	(0.0000307)	(0.0000297)	(0.0000298)
DAge	−0.0191*	−0.0152	−0.0145	−0.0164*	−0.0131	−0.0133
	(0.0103)	(0.0099)	(0.0100)	(0.0087)	(0.0084)	(0.0085)
Cup	0.0610***	0.0624***	0.0263	0.0384**	0.0395**	0.0453
	(0.0223)	(0.0214)	(0.0507)	(0.0189)	(0.0181)	(0.0430)
Model or Entertainer	0.2096**	0.2293**	0.0656	0.3210***	0.3376***	0.3697**
	(0.0965)	(0.0925)	(0.218)	(0.0817)	(0.0783)	(0.1845)
Risky sex		0.7288***	0.4395		0.6134***	0.6626**
		(0.1159)	(0.3076)		(0.0981)	(0.2608)
Cup × Risky sex			0.0434			−0.0070
			(0.0560)			(0.0475)
Model or Entertainer × Risky sex			0.1939			−0.0380
			(0.2338)			(0.1982)
Constant	2.3768***	1.7453***	1.9770***	1.9782***	1.4467***	1.4077***
	(0.2751)	(0.2820)	(0.3700)	(0.2327)	(0.2388)	(0.3137)
Sample	439	439	439	439	439	439
R^2	0.5835	0.6185	0.6196	0.5048	0.5459	0.5459

SEs in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Model 3 and Model 6 further measure the impact of appearance and risky sex on the number of video production. The results show that serving models or entertainers, as well as risky sex, have positive influences on the number of single-actress videos produced (Model 6). On the other hand, the risky sex does not increase the production of AV actresses with greater cup sizes or working as models or entertainers. This implies that popular actresses with favoured appearances in the market have no incentives to act in risky sex videos.

4. Conclusion

By using data of the Japanese AV actresses whose career commenced between 2002 and 2013, this study explored the physical appearance and risky sex influences on the AV production in the pornography industry. Empirical results show that significant influences are brought by cup sizes, working experiences, experiences as models or entertainers and whether the actress had acted in videos containing risky sex. It is also found that production of AV actresses with greater cup sizes or working as models or entertainers is not increased by risky sex videos. We interpret it as a result of their lack of incentive to do so, given their abilities to attract consumers' attention by their extraordinary appearances.

Islam and Smyth (2012), Gertler, Shah, and Bertozzi (2005) and Chang and Weng (2012) pointed out that appearance-favoured sex workers obtain higher pays than others in trades of risky sex or that appearance-disfavoured workers are more willing to conduct risky sex. Our empirical study instead shows that, in the Japanese AV industry, appearance-favoured actresses do not have to increase their production by acting in videos of high risks of sexually transmitted diseases or sexual abuses. Such results indicate that appearance-favoured actresses can raise the production by their own appearances, which lowered their incentives to act in videos of risky sex.

Disclosure statement

No potential conflict of interest was reported by the authors.

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